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AEROMODELLER & MODEL AIRCRAFT

PLANS HANDBOOK

A FULLY ILLUSTRATED CATALOGUE OF THE FAMOUS M.M. & M.E. PLANS TOGETHER WITH INSTRUCTIONAL ARTICLES TO HELP YOU TO BUILD AND OPERATE BETTER MODELS

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HOW TO CHOOSE THE RIGHT ENGINE FOR YOUR MODEL

THE WORLDS ENGINES ARE LISTED ON THE FOLLOWING PAGES

Put the right engine in your A.P.S. designed model and you will have the perfect combination for many hours of model flying.

IS YOUR engine going to help you select your next model?—or are you selecting a design and then buying an engine to suit? Either way, this table of the World's model engines, the majority of which are in full scale production this year, will help you take your pick.

The old scheme of classifying engine utility against its capacity used to serve as a standard yardstick—until engine design unfolded new techniques, new power levels. For example, there are some 1.5 c.c. diesels equal in usefulness to others of 2.5 capacity. Conversely there are 2.5 c.c. engines with "slogging" power at lower revs per minute, that equal much larger engines for use in a sport model, yet fall below requirements for 2.5 c.c. when employed for a contest model.

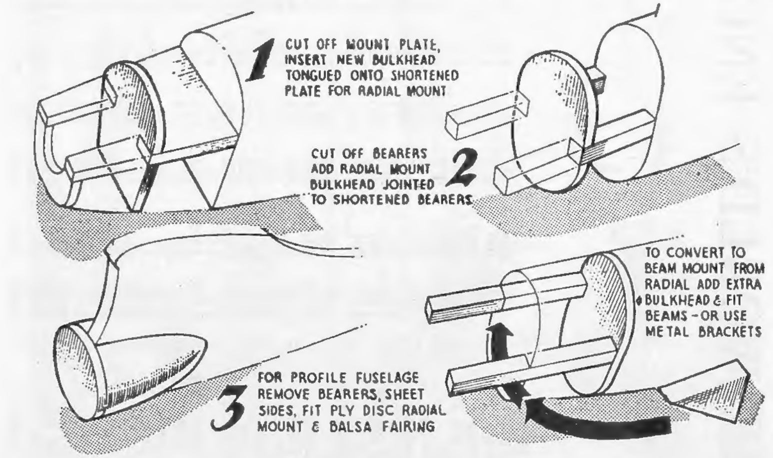
Grading the World's engines so that due allowance be made for differences in characteristics and power output has meant that no less than fourteen classes are used to segregate the vast range from 15 to 26 c.c. The classes are lettered from A to O and to find the grading for your particular engine, just follow the line against its name until you reach the "power coding" column.

In each caption to AEROMODELLER Plans Service power driven designs, equivalent code letterings are included between the plan number and its price. For example:—

BI-PLAY
PET/582 **C,D,E,** **4/6**

This is an exceptional example capable of taking a wide range of power units; but we quote it because giving more than one code letter means that **all** engines with these quoted codes will be suitable and capacity is more or less disregarded. It will be found that many diesels equal glowplug engines of larger capacity, that the "point-five" size diesels are divided, and that the method of mounting is also defined. "Radial" mounting generally implies an engine with a front rotary induction valve via the crankshaft. Such an engine may require slight modification to your A.P.S. selection since the majority of British power units are "Beam" mounted. Alteration is simple in every case when

Continued on page 10


1
CUT OFF MOUNT PLATE, INSERT NEW BULKHEAD TONGUED ONTO SHORTENED PLATE FOR RADIAL MOUNT
2
CUT OFF BEARERS ADD RADIAL MOUNT BULKHEAD JOINTED TO SHORTENED BEARERS
TO CONVERT TO BEAM MOUNT FROM RADIAL ADD EXTRA BULKHEAD & FIT BEAMS - OR USE METAL BRACKETS
3
FOR PROFILE FUSELAGE REMOVE BEARERS, SHEET SIDES, FIT PLY DISC RADIAL MOUNT & BALSA FAIRING

MODIFICATION RADIAL TO BEAM OR VICE VERSA

THE WORLD'S ENGINES

ENGINE	DISPLACEMENT cc.	DISPLACEMENT cu. ins.	Cylinder Bore	Cylinder Stroke	WEIGHT (ozs)	Useful RPM RANGE	RECOMMENDED PROPELLER Sport F/F	RECOMMENDED PROPELLER Contest F/F	RECOMMENDED PROPELLER Contest C/L	MOUNTING*		* Induction	POWER GROUP	ENGINE
BRITISH														**BRITISH**
Q.S. Dart	.55	.036	.35	.35	1.25	9–14000	7x4	6x3	6x4	R or B	11/16	FR	**C**	**Q.S. Dart**
Q.S. Merlin	.76	.047	.375	.420	1.75	9–14000	8x4	7x4	6x6	R or B	13/16	FR	**C**	**Q.S. Merlin**
Q.S. Bantam	.762	.0465	.410	.352	1.5	10–18000	6x3	5x3	6x4	B	11/16	FR	**C**	**Q.S. Bantam**
Frog .80 Mk IID	.80	.049	.400	.392	1.9	7–14000	7x4	6x4	6x6	B	11/16	FR	**C**	**Frog .80 Mk IID**
Frog .049	.808	.0492	.400	.392	1.8	8–15000	6x4	6x3	6x4	B	11/16	FR	**C**	**Frog.049**
M.E. Heron†	.97	.059	.424	.420	2.4	7–14000	8x4	6x4	7x6	B	7/8	FR	**D**	**M.E. Heron†**
Q.S. Spitfire	.975	.059	.425	.420	3.0	9–12000	9x4	7x4	7x6	R or B	7/8	FR	**D**	**Q.S. Spitfire**
A.M. 10	1.00	.061	.462	.430	3.0	11–14000	8x4	7x4	7x6	B	7/8	FR	**E**	**A.M. 10**
Frog 100 Mk II	1.02	.062	.415	.460	3.0	6–14000	8x5	7x4	7x5	B	7/8	FR	**E**	**Frog 100 Mk II**
Mills 1.3	1.33	.081	.406	.625	3.25	5–8000	9x5	7x4	8x6	B	1 1/8	SP	**E**	**Mills 1.3**
Oliver Tiger Cub Mk II	1.46	.089	.4659	.523	4.125	7–17000	9x4	8x4	8x4	B	1	FR	**F**	**Oliver Tiger Cub Mk II**
M.E. Snipe†	1.474	.0911	.505	.455	4.1	7–13000	9x4	7x4	7x6	B	7/8	FR	**F**	**M.E. Snipe**
P.A.W. 1.49	1.473	.09	.494	.469	3.5	7–18000	9x4	7x4	7x6	B	7/8	FR	**F**	**P.A.W. 1.49**
A.M. 15†	1.48	.09	.517	.430	3.0	7–15000	9x5	8x4	7x6	B	7/8	FR	**F**	**A.M. 15†**
Frog Viper	1.48	.09	.590	.460	4.125	8–16000	9x4	7x4	7x6	B	11/16	RDr	**F**	**Frog Viper**
Q.S. Sabre	1.49	.091	.525	.42	3.0	10–12000	8x6	8x4	8x6	B	7/8	FR	**E**	**Q.S. Sabre**
Frog 150 R Mk II	1.49	.091	.500	.460	3.25	11–14000	9x5	7x4	7x6	B or R	7/8	FR & RD	**F**	**Frog 149/150 R Mk II**
A.M. 25	2.4	.147	.57	.562	4.00	10–13000	10x6	8x3	8x6	B	1	FR	**G**	**A.M. 25**
Oliver Tiger Mk IV	2.452	.1496	.552	.625	6.0	8–18000	10x6	8x4	8x6	B	1 1/8	FR	**G**	**Oliver Tiger Mk IV**
P.A.W. 2.49 Mk III	2.46	.15	.592	.532	5.0	8–17000	10x6	8x4	8x6	B	1	FR	**G**	**P.A.W. 2.49 Mk III**
E.D. Racer†	2.46	.15	.59	.55	5.4	10–15000	10x6	9x4	9x6	B	1 1/8	RD	**G**	**E.D. Racer†**
E.T.A. Elite	2.48	.15	.558	.620	5.75	8–18000	10x6	8x4	8x6	B	1 1/8	RD	**G**	**E.T.A. 15 Mk II**
Frog 249 B.B.	2.49	.151	.58	.568	6.0	8–16000	11x6	10x4	9x6	B	1 1/16	FR	**G**	**Frog 2.49 B.B.**
P.A.W. 19 Mk II B.R.	3.128	.1912	.642	.590	5.5	7–16000	10x4	8x4	8x6	B	1	FR	**H**	**P.A.W. 19D**
Frog 3.49†	3.49	.209	.666	.600	6.7	6–13000	11x6	9x4	9x6	B	1 1/8	RDr	**H**	**Frog 3.49†**
A.M. 35	3.42	.209	.687	.562	4.5	10–14000	11x6	9x4	9x6	B	1	FR	**H**	**A.M. 35**
Merco 29†	4.75	.29	.734	.703	7.5	9–13000	12x6	10x6	10x6	B	1 9/16	FR	**J**	**Merco 29†**
E.T.A. 29 VIc	4.95	.30	.75	.672	6.5	12–18000	12x6	10x5	8x8	B	1 1/4	RD	**K**	**E.T.A. 29 VIc**
Merco 35†	5.79	.35	.800	.703	7.5	9–13000	11x6	10x4	10x6	B	1 9/16	FR	**K**	**Merco 35†**
Taplin Twin†	6.920	.420	.650	.621	15.0	6–10000	12x6	—	10x8	B	1 1/4	SP	**J**	**Taplin Twin†**

Merco .49† ...	8.00	.49	.880	.805	12.5	3–12000	12x6	12x6	11x6	B	1¾	FR	**M**	**Merco .49†**
Taplin Twin† Mk II	8.00	.49	.705	.625	17.0	6–11000	12x10	—	12x10	B	1½	SP	**M**	**Taplin Twin† Mk II**
Taplin twin Mk III†	7.989	.4875	.705	.625	17.5	6–10000	14x6	—	11x8	B	1¼	SP	**M**	**Taplin twin Mk III**
Merco 61 Mk II† ...	10.00	.61	.9375	.875	13.0	3–12000	14x6	—	11x8	B	1¾	FR	**N**	**Merco 61†**
ITALIAN														**ITALIAN**
Barbini B38 ...	0.99	.061	.400	.48	2.0	10–13000	9x4	7x4	6x6	B	7/8	FR	**D**	**Barbini B38**
Super Tigre G32 ...	0.98	.0581	.413	.433	3.0	10–12000	9x4	7x4	7x4	B	13/16	RDr	**D**	**Super Tigre G32**
Super Tigre G31 ...	1.47	.0899	.492	.472	4.0	10–15000	9x4	7x4	7x6	B		RDr	**F**	**Super Tigre G31**
Super Tigre G30 ...	2.5	.15			6.5	13–16000	9x6	8x4	8x6	B		RDr	**G**	**Super Tigre G30**
Super Tigre G20/15D† ...	2.47	.151	.591	.551	6.0	10–16000	9x6	8x4	8x6	B	1⅛	FR	**G**	**Super Tigre G20/15D†**
Barbini B40 ...	2.47	.15	.570	.590	4.0	8–12000	9x4	8x4	8x6	B	1	RD	**G**	**Barbini B40**
Super Tigre G15 RV	2.47	.15	.591	.55	5.0	12–22000	9x4	7x3½	8x6	B	1⅛	RD	**G**	**Super Tigre G15 R.V.**
Super Tigre 15G† ...	2.47	.151	.591	.5512	5.0	10–17000	9x4	8x4	8x6	B	1⅛	FR	**G**	**Super Tigre G20/15G†**
Super Tigre G20/19†	3.21	.1962	.630	.630	5.0	8–13000	10x4	9x6	9x6	B	1⅛	FR	**H**	**Super Tigre G20/19†**
Super Tigre G20/23†	3.76	.22	.668	.628	5.0	10–15000	10x6	9x6	9x6	B	1⅛	FR	**H**	**Super Tigre G20/23†**
Super Tigre G21/29†	4.82	.294	.746	.668	8.5	10–15000	11x6	10x6	9x6	B	1¼	RD	**K**	**Super Tigre G21/29†**
Super Tigre G29 R.V.	4.82	.294	.746	.668	9.5	12–19000	11x6	10x5	10x5	B	1¼	RD	**K**	**Super Tigre G29 R.V.**
Super Tigre 35c & 35† ...	5.56	.345	.786	.707	8.5	10–17000	12x6	10x6	9x8	B	1¼	FR	**K**	**Super Tigre 35c & 35†**
Super Tigre G21/40†	6.6	.400	.805	.786	8.5	10–17000	12x6	10x6	9x8	B	1¼	FR	**L**	**Super Tigre G21/40†**
Super Tigre G21/46†	7.28	.460	.864	.786	8.5	10–17000	12x6	10x6	10x6	B	1¼	FR	**L**	**Super Tigre G21/46†**
Super Tigre 56 B.B.†	9.13	.556	.903	.864	12.0	10–15000	12x6	11x6	10x8	B	1½	FR	**N**	**Super Tigre 56 B.B.†**
Super Tigre 60 B.B.†	9.92	.607	.95	.86	14.4	8–18000	12x6	13x4	9x12	B	1½	RD	**N**	**Super Tigre 60 B.B.†**
Rossi 60† ...	9.8	.598	.940	.875	15.0	13–17000	12x6	13x4	9x12	B	1½	RD	**N**	**Rossi 60†**
AMERICAN														**AMERICAN**
Cox Tee Dee 010 ...	.163	.010	.237	.226	0.5	16–34000	3¼ in. supplied			R		FR	**B**	**Cox Tee Dee 010**
Cox Tee Dee 020 ...	.327	.020	.300	.282	0.85	13–23000	3⅛x2¼	Cox, 4x2½	Cox	R		FR	**C**	**Cox Tee Dee 020**
Cox Pee Wee 020 ...	.327	.020	.300	.282	0.80	10–20000	3⅛x2¼	Cox, 4x2½	Cox	R		RR	**B**	**Cox Pee Wee 020**
OK Cub 024 ...	.409	.025	.320	.310	0.9	10–20000	3x2	4x2	4x2½	R		RR	**B**	**OK Cub 024**
Holland Hornet 049†	.795	.049	.422	.350	2.0	8–15000	6x4	5½x3	5½x3	R		FR	**D**	**Holland Hornet 049†**
K & B Tornado 049...	.800	.049	.400	394	1.7	8–15000	6x4	5½x3	5½x3	R		RR	**D**	**K & B Tornado 049**
K & B Stallion 049...	.801	.0496	.400	.395	2.2	10–18000	6x3	5x3	5x3	R or B	7/8	FR	**C**	**K & B Stallion 049**
Cox Babe Bee 049 ...	.81	.0499	.406	.382	1.75	12–16000	6x4	6x4	6x4	R		RR	**C**	**Cox Babe Bee 049**
Cox Q.Z. 049 ...	.817	.0499	.406	.386	2.1	10–18000	7x4	6x4	6x6	R		RR	**C**	**Cox QZ 049**
Cox Golden Bee ...	.81	.0499	.406	.382	1.9	10–17000	6x4	6x3	6x4	R		RR	**C**	**Cox Golden Bee**
Cox Medallion 049†...	.81	.0499	.406	.382	1.5	12–18000	6x4	5x3	5x4	B	5/8	FR	**C**	**Cox Medallion 049†**
Cox Two-Ninety ...	.81	.049	.406	.382	1.9	12–16000	6x4	6x3	6x4	R		RR	**C**	**Cox Two-Ninety**
Cox Tee Dee 049 ...	.81	.0499	.406	382	1.5	14–20000	6x4	5x3	5x4	B	9/16	FR	**D**	**Cox Tee Dee 049**
Fox 049 ...	.81	.0499	.390	.420	1.5	12–19000	6x4	5x3	5x4	R or B	¾	FR	**C & D**	**Fox 049 & F.A.I.**
OK Cub 049 Diesel ...	.81	.0499	.420	.360	1.6	8–13000	6x3	5x3	5x3	R or B		FR	**C**	**OK Cub 049 Diesel**
OK Cub 049A ...	.81	.0499	.420	.360	1.4	10–17000	6x4	6x3	6x4	R		RR	**C**	**OK Cub 049A**

***Definitions : R** radial. **B** beam. **FR** front rotary. **SP** sideport. **RD** rear disc. **RR** rear reed. **RDr** rear drum. Dimensions with **B** mounting symbol are for distance in inches between bearers (crankcase clearance) for Beam mounting

†Indicates that engine also appears in Radio Control version, which is slightly heavier.

OK Cub 049B	.81	.0499	.420	.360	1.4	11–19000	6x4	5x3	5x4	R or B		FR	**C**	**OK Cub 049B**
Wen Mac Hotshot 049	.81	.0499	.420	.360	1.9	10–18000	6x4	6x3	6x4	R or B	5/8	FR	**C**	**Wen Mac Hotshot 049**
Wen Mac Hustler 049	.81	.0499	.420	.360	1.3	10–17000	6x4	6x3	6x4	R or B	5/8	FR	**C**	**Wen Mac Hustler 049**
Wen Mac Rotomatic 049	.81	.0499	.420	.360	1.8	10–17000	6x4	6x3	6x4	R or B	5/8	FR	**C**	**Wen Mac Rotomatic 049**
Holland Hornet 051†	.89	.0503	.428	.350	1.8	13–20000	6x4	5x3	5x4	R		FR	**D**	**Holland Hornet 051†**
Cox Tee Dee 051	.90	.509	.420	.386	1.5	14–20000	6x4	5x3	5x4	B	5/8	FR	**D**	**Cox Tee Dee 051**
KB & Tornado 060	.96	.0576	.430	395	1.6	12–17000	6x4	6x3	6x6	R		RR	**D**	**K & B Tornado 060**
Fox 07 R/C†	1.14	.0698	.460	.420	—	10–15000	7x4	6x3	6x4	R or B		FR	**C**	**Fox 07 R/C†**
Gilbert 7	1.15	.070	.472	.400	2.6	12–16000	7x4	6x3	6x6	B	11/16	SP	**D**	**Gilbert 7**
OK Cub 074 Diesel	1.21	.0746	.479	.415	2.1	8–13000	6x4	6x3	6x4	R or B	3/4	FR	**C**	**OK Cub 074 Diesel**
OK Cub 074	1.21	.0746	.479	.415	1.7	10–13000	7x4	7x3	6x4	R or B	3/4	FR	**D**	**OK Cub 074**
Cox Medallion 09†	1.49	.0914	.497	.471	2.7	10–16000	8x4	7x4	7x6	B	13/16	FR	**F**	**Cox Medallion 09†**
Cox Tee Dee 09	1.49	.0914	.497	.471	2.7	11–18000	8x4	7x4	7x6	B	13/16	FR	**F**	**Cox Tee Dee 09**
Johnson Bulldog 09†	1.53	.0925	.498	.475	4.5	10–15000	8x4	7x3	7x6	R or B	15/16	FR	**D**	**Johnson Bulldog 09†**
OK Cub 099	1.6	.0999	.515	.480	2.0	8–13000	8x4	7x3	7x6	R or B	1	FR	**D**	**OK Cub 099**
K & B Torpedo 09	1.6	.0999	.521	.465	2.8	10–15000	9x4	7x4	7x6	B		FR	**F**	**K & B Torpedo 09**
Fox 10†	1.63	.1015	.530	.460	2.8	9–14000	9x4	7x4	7x6	B		FR	**F**	**Fox 10†**
Gilbert II	1.8	.1097	.582	.450	3.3	9–14000	9x4	8x3	7x6	B	11/16	SP	**F**	**Gilbert II**
Fox 15X†	2.420	.1476	.590	.540	3.6	13–30000	10x4	8x4	8x6	B	15/16	FR	**F**	**Fox 15X†**
OK Cub 14	2.46	.1499	.600	.530	2.8	9–15000	9x3	8x3½	7x6	R or B	1 1/8	FR	**F**	**OK Cub 14**
K & B Torpedo 15R Ser 64	2.485	.1516	.600	.537	4.9	10–18000	9x3	8x4	8x6	B	1 1/8	FR	**G**	**K & B Torpedo 15 R Ser 64**
Cameron 15†	2.49	.1524	.623	.500	4.2	8–13000	9x4	8x3½	8x6	B	1 1/16	FR	**F**	**Cameron 15†**
Cox Medallion 15†	2.49	.1525	.591	.556	4.2	10–17000	9x4	8x3	8x6	B	1	FR	**G**	**Cox Medallion 15†**
Cox Special 15 Mk II	2.49	.1525	.591	.556	4.5	11–20000	9x4	8x4	8x6	B	1	FR	**G**	**Cox Special 15 Mk II**
Cameron 19L†	3.113	.1933	.625	.630	4.5	6–14000	10x6	9x4	9x6	B	1 1/8	FR	**G**	**Cameron 19L†**
OK Cub 19	3.23	.1988	.655	.590	2.9	9–12000	10x6	9x4	8x6	B or R	1	FR	**G**	**OK Cub 19**
K & B Torpedo 19†	3.25	.190	.64	.62	5.5	11–14000	11x6	9x6	9x6	B	1 1/8	FR	**H**	**K & B Torpedo 19†**
Cameron 19R	3.26	.1995	.635	.625	4.5	9–13000	11x5	9x4	8x6	B	1 1/8	FR	**G**	**Cameron 19R**
McCoy 19†	3.27	.1998	.642	.617	5.9	8–14000	11x6	9x6	9x6	B	1 1/8	FR	**H**	**McCoy 19†**
McCoy Custom 19†	3.272	.1997	.642	.617	6.0	8–13000	9x4	9x4	9x5	B	1 5/32	FR	**G**	**McCoy Custom†**
FCP Twin Bee	1.634	.0997	.406	.386	6.5	7–13000	8x4	8x4	7x6	R		RR	**E**	**F.C.P. Twin Bee**
Veco 19 Series 150†	3.27	.1998	.635	.63	6.0	11–14000	11x6	9x6	9x6	B	1 1/8	FR	**H**	**Veco 19 Series 150†**
Veco 19 B.B. Series 200†	3.27	.199	.634	.633	7.0	6–16000	11x4	9x4	9x6	B	1 1/8	FR	**H**	**Veco 19 B.B. Series 200†**
K & B Torpedo 201	3.28	.2011	.640	.625	6.0	11–14000	11x6	9x6	9x6	B	1 1/8	FR	**H**	**K & B Torpedo 201**
Forster 29R†	4.86	.2969	.750	672	6.3	8–13000	11x6	10x5	9x6	B	1 5/16	FR	**H**	**Forster 29R†**
K & B Torpedo 29S	4.87	.2972	.725	.720	7.0	8–15000	12x6	10x5	10x6	B	1 1/4	FR	**J**	**K & B Torpedo 29S**
K & B Torpedo 29F Ser 64	4.9	.297	.725	.720	8.8	10–18000	11x4	10x5	10x6	B	1 1/4	FR	**J**	**K & B Torpedo 29F Ser 64**
K & B Torpedo 29R Ser 64	4.88	.2982	.750	.675	8.5	12–19000	12x6	10x5	10x6	B	1 1/4	RD	**K**	**K & B Torpedo 29R Ser 64**
Dooling 29	4.89	.2986	.800	.594	6.8	10–16000	10x6	10x4	7x9	B	1 1/4	RD	**K**	**Dooling 29**

Fox 29X B.B.	4.90	.2994	.738	.700	7.5	11–18000	11x6	10x5	7x10	B	1¼	RD	K	Fox 29X
OK Cub 29	4.90	.2994	.760	.660	6.1	6–10000	11x6	10x5	9x6	B		FR	J	OK Cub 29
McCoy R.H. 29†	4.905	.2996	.732	.712	7.2	8–13000	11x6	10x5	9x6	B	1¼	FR	H	McCoy R.H. 29
Johnson 29R	4.91	.2997	.729	.718	8.0	10–14000	11x4	10x5	10x6	B	1¼	FR	J	Johnson 29R
Veco 29R Series 100†	4.92	.3001	.725	.725	7.4	8–15000	12x6	10x5	10x6	B	1¼	FR	J	Veco 29R Series 100†
Johnson Sports Spec†	4.95	.3025	.729	.770	8.0	8–12000	11x6	10x4	10x6	B	1¼	FR	K	Johnson Sports Spec†
Aero 35†	5.69	.3470	.812	.670	10.5	8–12000	11x6	10x4	10x6	R		FR	K	Aero 35†
McCoy R.H. 35†	5.701	.3491	.775	.740	7.2	9–13000	12x6	10x5	10x6	B	1¼	FR	K	McCoy R.H. 35†
Johnson Stunt Sup	5.704	.3492	.770	.750	8.3	9–14000	11x6	10x4	10x6	B	1¼	FR	L	Johnson Stunt Sup
OK Cub 35	5.704	.3493	.800	.675	6.3	8–11000	11x5	10x3	10x6	B		FR	K	OK Cub 35
Veco 35 Ser 100 & 35c†	5.71	.3495	.784	.725	7.7	10–14000	12x4	10x4	10x6	B	1¼	FR	L	Veco 35 Ser 100 & 35c†
Forster 35R†	5.714	.3497	.781	.730	6.3	8–12000	12x6	10x3	10x6	R or B	1 5/16	FR	K	Forster 35R†
Fox 35 Stunt†	5.75	.3519	.800	.700	6.5	10–14000	12x6	10x6	10x6	B	1 3/16	FR	K	Fox 35 Stunt†
Fox 36X	5.75	.3519	.800	.700	7.5	11–16000	12x6	10x6	10x8	B	1¼	FR	L	Fox 35X
K & B Torpedo 35 & 35c†	5.7	.3529	.790	.720	7.6	11–15000	12x6	10x6	10x6	B	1¼	FR	L	K & B Torpedo 35 & 35c†
K & B Stallion 35	5.78	.3529	.790	.720	8.5	10–13000	12x4	10x6	10x6	B	1¼	FR	K	K & B Stallion 35
Johnson Combat Spec.	5.87	.3585	.770	.770	8.3	12–15000	12x6	10x6	10x8	B	1¼	FR	L	Johnson Combat Spec.
McCoy 40 R.H.†	6.5	.40	.775	.81	7.2	9–13000	12x4	10x4	10x6	B	1¼	FR	K	McCoy .40 R.H.†
K & B Torpedo 40 Ser 65†	6.5	.40	.790	.66	9.1	9–16000	12x4	10x4	10x6	B	1¼	FR	K	K & B Torpedo .40 Ser 65†
K & B Torpedo .40 F/R	6.539	.3990	.840	.790	8.6	10–18000	13x4	11x5	10x6	B	1 3/16	FR	M	K & B Torpedo .40 F/R
Fox 40 B.B.†	6.5	.3971	.800	.790	8.0	13–17000	12x6	10x6	8x9	B	1¼	FR	M	Fox 40 B.B.†
K & B Torpedo 45†	7.42	.4544	.840	.820	8.0	9–12000	13x6	11x4	11x6	B	1 5/16	FR	M	K & B Torpedo 45†
Veco 45 Series 200†	7.61	.4653	.850	.820	11.0	9–12000	13x4	11x6	11x6	B	1½	FR	M	Veco 45 Series 200†
Fox 59†	9.6	.5848	.907	.905	10.0	10–16000	14x6	12x6	11x8	E	1½	FR	N	Fox 59†
Dooling 61	9.92	.6070	1.015	.75	14.0	11–18000	12x8	10x6	9x12	B	1½	RD	N	Dooling 61
McCoy R.H. 60 Ser 20	9.93	.6072	.940	875	14.0	12–16000	12x8	11x6	9x12	B	1½	RD	N	McCoy R.H. 60 Ser 20
AUSTRALIAN														AUSTRALIAN
Taipan 1.5 Glow	1.517	.0927	.511	.452	3.0	10–13000	8x5	7x4	7x6	R or B	⅞	FR	F	Taipan 1.5 Glow
Taipan 1.5b Series 66	1.522	.0929	.511	.453	3.8	9–15000	9x4	8x4	8x5	B	⅞	FR	F	Taipan 1.5b Series 66
Taipan 2.5	2.506	.1529	.575	.578	5.5	9–13000	10x4	8x4	8x6	B		FR	G	Taipan 2.5
Taipan 2.5 B.R.	2.506	1529	.575	.578	6.0	12–15000	10x4	8x4	8x6	B	1 1/16	FR	G	Taipan 2.5 B.R.
Taipan 2.5 Glow	2.431	.1493	.575	.575	4.5	13–16000	9x4	8x4	8x6	B		FR	G	Taipan 2.5 Glow
Taipan 19 BB†	3.233	.1973	.634	.625	7.2	8–14000	10x4	9x4	9x5	B	1 5/32	FR	G	Taipan 19 B.B.
Glo-Chief 19	3.25	.1994	.640	.620	6.1	10–16000	11x6	9x6	9x6	B		FR	H	Glo-Chief 19
Glo-Chief 29 B.R.	4.87	.2972	.725	.720	8.0	13–17000	11x6	10x5	9x6	B	1 5/16	FR	J	Glo-Chief 29 B.R.
Glo-Chief 35†	5.87	.3592	.797	.720	8.0	9–14000	12x6	10x6	10x6	B	1¼	FR	K	Glo-Chief 35†
Glow-Chief 45†	7.43	.4544	.840	.820	7.6	9–12000	13x4	11x6	11x6	B	1¼	FR	I	Glow-Chief 45†
GERMAN														
WMD-05	0.50	.0305	.3346	3465	1.4	9–15000	6x4	6x3	5½x3	B		FR	B	WMD-05
Webra Piccolo	0.78	.049	.410	.350	1.5	8–14000	8x4	7x4	6x6	B	11/16	FR	C	Webra Piccolo

Taifun Hobby	0.99	.060	.424	.060	2.0	7–13000	8x4	7x4	6x4	B		7/8	FR	D	Taifun Hobby
WAF-I	0.99	.0601	.402	.472	2.5	8–12000	8x4	7x4	6x6	B			FR	D	WAF-I
Jena-I	0.993	.0604	.4213	.4331	3.1	8–11000	9x6	8x4	7x6	B		15/16	FR	D	Jena-I
Webra Record†	1.48	.0898	.512	.453	3.0	8–14000	8x5	7x4	7x6	B		7/8	RR	F	Webra Record†
Taifun Hurrican	1.51	.0903	.507	457	3.8	10–14000	9x4	7x4	7x6	B			FR	F	Taifun Hurrican
Wilo 1.5	1.6	.0912	.500	.4646	2.7	8–13000	8x4	7x4	6x6	B		5/16	SP	F	Wilo 1.5
Taifun Sprint	1.789	.1092	.5315	.4921	3.5	9–17000	9x4	8x4	7x6	B		29/32	FR	F	Taipan Sprint
Webra Sport Glo 1.7†	1.686	.1029	.5118	.5000	3.4	8-16000	9x4	7x4	7x6	B		29/32	FR	F	Webra Sport Glo 1.7†
Jena 2M & 2D	1.98	.1204	.5472	.5118	5.1	8–12000	9x4	8x4	8x6	B		1	RR & RD	F	Jena 2M & 2D
Jena 2.5 DK & MK	2.45	.1497	.6102	5118	5.0	8–13000	9x6	8x4	8x6	B		1	RR & RD	F	Jena 2.5 DK & MK
Taifun Orkan	2.46	.1503	.5512	6299	6.0	9–16000	9x6	8x4	8x6	B		1 1/16	RD	G	Taifun Orkan
Webra Winner-II†	2.46	.1503	.5512	.6299	4.2	8–12000	10x6	9x4	9x6	R	cr B	1 1/16	FR	G	Webra Winner-II†
Taifun Blizzard	2.477	.1510	.5905	.5512	6.0	8–16000	9x6	8x5	8x6	B		1	RR	G	Taifun Blizzard
Taifun Rasant-II and Tornado	2.477	.1510	.5905	.5512	5.0	8–14000	10x6	8x4	8x6	B		1 1/8	FR	G	Taifun Rasant-II and Tornado
Taifun Zyklon†	2.477	.1510	.5905	.5512	5.6	10–13000	10x6	9x6	8x6	B		1 1/8	FR	G	Taifun Zyklon†
Webra Mach-II	2.48	.1512	.5512	.6339	6.2	8–18000	9x6	8x4	8x6	B			FR	G	Webra Mach-II
Webra Bully II†	3.146	.2088	.6496	.6299	5.9	8–13000	9x6	9x6	9x6	B		1 1/4	RD	H	Webra Bully-II†
Webra Bison†	3.629	.2213	.6299	.7087	6.5	8–15000	9x6	9x4	8x6	B		1 1/4	FR	H	Webra Bison†
Webra Big Ben 5†	4.81	.2941	.7480	.6693	7.8	6–11000	11x6	10x6	10x6	B			FR	J	Webra Big Ben 5†
Webra 61†	9.953	.6074	.9449	.8661	15.6	8-14000	13x5	12x5	11x6	B		1 9/16	FR	N	Webra 61†
FRENCH															**FRENCH**
Micron Meteore 09	0.94	.0575	.3937	.4724	2.0	6–11000	7x4	7x3	7x4	B			SP	D	Micron Meteore 09
Allouchery Cormoran	.9503	.0580	.4331	.3937	2.7	7-15000	8x4	7x4	7x6	B		25/32	FR	E	Allouchery Cormoran
Fok 25	2.474	.1510	.5905	.5512	5.0	8-14000	9x4	8x4	8x5	B		1 3/32	FR	G	Fok 25
Stab 1.25	1.241	.0767	.3937	6299	6.0	8–12000	9x5	7x4	7x6	B			FR	D	Stab 1.25
Micron Meteore 1.5	1.523	.0931	.5118	.48	2.3	8–13000	10x5	9x4	7x6	B			FR	E	Micron Meteore 1.5
Micron Racing 2.5	2.46	.1501	.5551	.6201	6.0	8–16000	9x6	8x4	8x6	B			FR	G	Micron Racing 2.5
REA 2.5 Series 200	2.463	.1503	.5512	.6299	4.8	8–12000	10x4	8x4	8x6	R	or B		FR	F	REA 2.5 Series 200
Micron Special 2.5	2.477	.1510	.5905	.5512	3.6	8–16000	9x6	8x4	8x6	B			FR	G	Micron Special 2.5
Micron Super Sport	4.81	.2941	.7480	.6693	7.7	9–13000	12x6	10x6	10x6	B			FR	J	Micron Super Sport
Micron 29	4.81	.2941	.7480	.6693	8.0	10–15000	12x6	10x5	8x8	B			RD	J	Micron 29
REA 5 cc. Series 200	4.97	.3029	.7087	.7677	6.0	8–12000	10x6	10x4	9x6	B			FR	H	REA 5 cc. Series 200
Micron 35	5.93	.3626	.8071	.7087	8.0	9–13000	11x6	10x4	10x6	B			FR	H	Micron 35
Micron 60	9.94	.6074	.9449	.8661	13.4	9–13000	11x6	10x6	10x8	B			RD	N	Micron 60
HUNGARIAN															**HUNGARIAN**
FOK 10	0.94	.0575	.3937	.4724	2.9	9–12000	8x4	7x4	7x6	B			FR	D	FOK 10
FOK 15	1.45	.0899	.4921	.4724	3.3	7–14000	9x4	7x4	7x6	B			FR	F	FOK 15
Moki TR-6	2.46	.1503	.5512	.6299	5.8	8–18000	9x6	8x4	8x6	B			FR	G	Moki TR-6
Moki-S-2	2.477	.1510	.5905	.5512	5.1	10–20000	9x4	8x4	8x6	B		1 1/8	FR	G	Moki S-2
Moki S-3	2.477	.1510	.5905	.5512	5.3	12–20000	9x4	8x4	8x6	B		1 1/8	RD	G	Moki S-3
FOK-25	2.477	.1510	.5905	.5512	5.2	8–13000	9x6	8x4	8x6	B			FR	G	FOK-25
Moki D-I	2.477	.1510	.5905	.5512	5.7	8–14000	9x5	8x4	8x6	B			FR	G	Moki D-I
Moki S-4	4.94	.3021	.7480	6748	8.5	10–17000	12x6	9x4	7x10	B		1 5/16	RD	K	Moki S-4
Moki M-3	5.94	.36	.7874	.748	7.87	9–14000	11x6	10x4	10x6	B		1 7/16	FR	K	Moki M-3

CZECHOSLOVAKIAN														CZECHOSLOVAKIAN
M.V.V.S. 1-D ...	0.99	.0604	.4213	.4331	2.8	12–16000	8x4	7x4	7x6	B		FR	E	M.V.V.S. I-D
M.V.V.S. 2.5 T/R ...	2.46	.1503	.5512	.6299	5.3	9–16000	9x6	8x4	8x6	B		FR	G	M.V.V.S. 2.5 T/R
M.V.V.S 5.6 ...	5.67	.3458	.7874	.7087	7.3	10–14000	12x6	10x4	10x6	B	1 7/16	RD	K	M.V.V.S. 5.6
POLISH														POLISH
Jaskolka-2 ...	2.477	.1510	.5905	.5512	4.8	8–13000	9x5	8x4	8x6	B	1 1/16	RR	G	Jaskolka-2
Jaskolka-3 ...	2.477	.1510	.5905	.5512	4.8	9–14000	9x5	8x4	8x6	B	1 1/16	RD	G	Jaskolka-3
Super-Sokol Glow ...	4.89	.2989	.7677	.6457	8.5	12–14000	11x6	10x5	10x6	B		RD	H	Super-Sokol Glow
Super-Sokol Diesel ...	4.89	.2989	.7677	.6457	8.7	10–13000	11x6	10x5	10x6	B		RD	H	Super-Sokol Diesel
CHINESE														CHINESE
Yin Yan (Sil. Swallow) ...	2.477	.1510	.5905	.5512	5.0	8–14000	9x6	8x4	8x6	B		FR	G	Yin Yan (Sil. Swallow)
JAPANESE														JAPANESE
Enya 049 ...	0.803	.0495	.413	.370	1.9	9–11000	6x6	5x3	6x4	R or B		RR	B	Enya 049
Fuji 049 ...	0.803	.0499	.4016	.3937	1.6	8–9000	6x4	5½x3	6x4	R or B	7/8	FR	B	Fuji 049
O.S. Max-6 ...	0.989	.0603	.4331	.4094	2.0	10–13000	7x4	7x4	7x4	B		FR	C	O.S. Max-6
Enya 06 Glow† ...	0.994	.0607	.437	405	2.0	10–14000	7x6	7x4	7x6	R or B		RR	D	Enya 06 Glow†
Enya 06 Diesel† ...	0.994	.0607	.437	.405	2.3	8–13000	7x4	7x4	7x6	R or B		RR	D	Enya 06 Diesel†
Fuji 061 ...	0.998	.0609	.4437	.3937	1.6	12–14000	8x3	7x3	7x4	R or B		FR	D	Fuji 061
Strong .09 ...	1.6	.098	.5	.5	—	8–14000	8x4	7x3	7x6	B		FR	F	Strong .09
Enya 09-II† ..	1.60	.0982	.500	.498	3.5	7–15000	8x4	7x4	7x6	B	1	FR	E	Enya 09-II†
Enya .09-III ...	1.619	.0988	.5118	.4803	3.7	7-19000	9x4	8x4	8x5	B	15/16	FR	F	Enya .09-III
Ueda .09† ...	1.6	.096	.5	.48	3.4	8–14000	8x4	7x4	7x6	B		FR	F	Ueda .09†
Ueda Cougar .09† ...	1.5708	.0958	.500	.4882	3.8	7-11000	8x4	7x4	7x5	B	1	FR	E	Ueda Cougar .09†
Fuji 099 ...	1.60	.0982	.500	.500	3.6	9-12000	8x4	7x3	7x6	R or B		FR	D	Fuji 099
Fuji 099-S ...	1.609	.0982	.500	.500	3.8	9-14000	8x4	8x4	7x6	B	31/32	FR	E	Fuji 099-S
Kyowa 09 ...	1.61	.0985	.535	.438	3.0	7-13000	8x4	7x4	7x6	B		FR	F	Kyowa 09
O.S. Pet-II† ...	1.61	.0985	.529	.448	2.75	8-15000	8x4	8x3	7x6	B	¾	FR	E	O.S. Pet-II†
O.S. Max 10† ...	1.749	.1067	.5276	.4882	3.2	8-16000	8x4	8x4	7x6	B	29/32	FR	F	O.S. Max 10†
Enya 15-II† ...	2.477	.1510	.5905	.5512	4.4	9-14000	10x6	8x4	8x6	B	1 1/16	FR	G	Enya 15-II†
Enya 15-III† ...	2.474	.1510	.5905	.5512	5.0	9-16000	9x4	8x4	8x6	B	1	FR	G	Enya 15.III†
Fuji .15† ...	2.48	.151	59	.55	4.8	8-13000	10x6	8x3	8x6	B		FR	G	Fuji 15†
Enya 15 D-II† ...	2.477	.1510	.5905	.5512	6.3	10-16000	10x4	8x4	8x6	B	1 3/16	FR	G	Enya 15 D-II†
Ueda .15† ...	2.48	.151	.59	.55	4.6	8-13000	10x6	8x3	8x6	B		FR	G	Ueda .15†
O.S. Max 15-III† ...	2.48	.1515	.598	.5394	4.0	9-16000	10x6	8x4	8x6	B	15/16	FR	G	O.S. Max 15-III†
Ueda .19† ...	3.246	.1981	.6535	.5905	5.9	9-14000	9x4	8x4	8x6	B	1 5/32	FR	G	Ueda .19†
O.S. Max 19† ...	3.16	.1928	.6535	.5748	5.0	10-14000	10x6	9x4	9x6	B	1 1/16	FR	H	O.S. Max 19†
Enya 19-IV† ...	3.21	.1962	.6299	.6299	5.4	12-16000	10x5	9x4	9x6	B		FR	H	Enya 19-IV†
Fuji 19† ...	3.21	.1962	.6299	.6299	6.0	9-13000	10x5	9x4	9x6	B	1 3/16	FR	H	Fuji 19
Fuji 29† ..	4.81	.2941	.7480	.6680	8.5	12-14000	10x6	9x5	9x6	B	1¼	FR	H	Fuji 29
O.S. Max-III 29† ...	4.85	.2951	.739	.688	8.5	10-14000	11x6	10x5	9x6	B	1 5/16	FR	J	O.S. Max-III 29†
O.S. Max-III 29X ...	4.85	.2951	.739	.688	8.2	12-17000	11x4	10x5	8x8	B		FR	J	O.S. Max-III 29X
K.O. .15† ...	2.49	.152	.60	.53	3.6	9-13000	10x6	8x3	8x6	B		FR	G	K.O. .15†
O.S. Max-H 29R ..	4.86	.296	.74	.69	8.5	10-17000	11x6	10x5	9x6	B	1 5/16	FR	J	O.S. Max-H 29R
O.S. Max-H 29T/R ...	4.86	.296	74	.69	8.5	11-16000	11x6	10x5	8x8	B	1 5/16	FR	J	O.S. Max-H 29T/R
O.S. Max-S30† ...	4.86	.296	.74	.69	7.8	8-14000	11x6	10x6	10x6	B	1 5/16	FR	J	Max-S 30†

Enya 29-IVM†	4.88	.2987	.735	.704	6.8	12–15000	12x4	10x5	9x6	B	1⁵⁄₁₆	FR	K	**Enya 29-IVM†**
Enya 29-IV Spl.	4.88	.2987	.735	704	7.2	13–16000	12x4	10x5	8x9	B	1⁵⁄₁₆	FR	K	**Enya 29-IV Spl.**
Fuji 35†	5.75	.3516	.7992	.7008	8.8	13–15000	12x6	10x6	10x6	B		FR	K	**Fuji 35**
O.S. Max-III 35†	5.80	.3545	.810	686	8.3	10–14000	12x6	10x5	10x6	B	1⁵⁄₁₆	FR	K	**O.S. Max-III 35†**
O.S. Max-S/35	5.82	.3559	.811	.689	—	9–13000	12x4	10x5	10x6	B	1⁵⁄₁₆	FR	K	**O.S. Max S35**
Enya 35-III†	5.98	.3565	.803	.704	8.3	9–12000	12x4	10x6	10x6	B	1⁵⁄₁₆	FR	K	**Enya 35-11†**
O.S. Max-H 40RR†	6.5	.396	.811	.7677	8.3	10–17000	11x5	10x5	8x9	B	1⁵⁄₁₆	FR	K	**O.S. Max-H 40RR†**
Enya 45 B.B.-T.V.†	7.499	.4576	.8780	.7559	10.1	8-14000	12x5	11x4	11x6	B	1 5/16	FR	M	**Enya 45 B.B.-T.V†**
Enya 45†	7.35	.4488	.874	.748	8.2	9–13000	13x6	11x5	11x6	B	1⁵⁄₁₆	FR	M	**Enya 45†**
Kyowa 45†	7.41	.4531	.8629	.7755	9.3	8–13000	13x6	11x5	11x6	B	1⅜	FR	M	**Kyowa 45†**
Ueda .45†	7.695	.4696	.8505	.8268	12.7	8-14000	12x6	11x4	11x6	B	1 11/32	FR	L	**Ueda .45†**
O.S. Max 49†	8.15	.4978	.8976	.7874	9.8	9–12000	13x6	11x5	11x6	B	1⅜	FR	M	**O.S. Max 49†**
O.S. Max 50†	8.29	.507	.905	.787	12.1	9–12000	13x6	11x5	11x6	B	1⅜	FR	M	**O.S. Max 50†**
Enya 60†	9.95	.6074	.9449	.8661	14.0	10–16000	14x6	12x5	12x8	B	1⅝	FR	N	**Enya 60†**
O.S. Max-R 60†	9.95	.6074	.9449	.8661	—	10–17000	14x6	12x6	9x12	B		RD	N	**O.S. Max-R† 60**
O.S. Max H-60†	9.953	.6074	.9449	.8661	14.5	8-15000	13x6	12x6	11x6	B	1½	FR	N	**O.S. Max H-60†**
O.S. Max H.60†	9.950	.6074	.9449	.8661	14.9	8-15000	13x6	12x6	11x6	B	1½	RD	N	**O.S. Max H-60†**
Ueda Cougar .61†	9.953	.6074	.9449	.8661	17.0	7-12000	13x6	12x6	11x6	B	1½	FR	N	**Ueda Cougar .61†**

Continued from page 3

beams are specified on the plan. First measure the distance from the rear of the propeller to the rear face of the "Radial" engine mount and indicate this on the plan with a vertical line on the side view. This will be the position of your new "Radial" bulkhead and the beams should be sawn off flush to allow a key to be made with the ⅛-in. plywood radial mount.

Should the design be a profile type, for example **PET 499 STOMPER** a bulkhead can be attached directly to the front of the fuselage, the existing beams deleted, and block balsa fillers used to streamline and support the engine mounting. If the design calls for radial mounting then one must first consider whether beams are at all possible. A tank or structure of some importance may prevent a full set of beam mounts being inserted through the existing bulkhead. In such cases, use metal angle bearers, once a popular item in every model shop and nowadays a rather neglected feature.

Every A.P.S. design can be converted from beam to radial in this way, but designs that specifically call for one or other of Beam or Radial mounting are duly captioned, for example **PET 453 Fokker D.R.1**, which is "Radial" or **U.488 Jumping Jiminy, which is** "Beam." This does not necessarily restrict the design to that particular mounting, for modification is still possible with a minimum of ingenuity. Likewise, engines with rear disc (R.D.) induction, such as the E.D. 2.46 c.c. "Racer" call for additional clearance immediately behind the engine to allow access to the carburettor.

Propeller Section

Against each engine there are three sizes of propeller. These are basic dimensions derived from practice in the field, contest flying, sports flying and designer's advice. Use the size given if you have any doubt on your own selection—and remember—large airframes (72 in. for 2.5 c.c.) require an extra inch in prop diameter, keeping advised pitch, and smaller airframes (48 in. for 2.5 c.c.) can be cut by as much as half an inch on diameter.

Gear the pitch of your prop against the rate of climb and engine r.p.m. (4 in. pitch for a fast climbing contest model and 12,000-13,000 r.p.m. engine) or step up the pitch for slower sports models (6 in. pitch for 7,000-9,000 r.p.m.). A good tip is to fit the prop back to front for first test flights when full thrust is not advisable.

Above all: mount your engine firmly, treat it with the respect it deserves and give it a fair chance—you can always rely on the A.P.S. design to make full use of the power it develops.

Starting a Model Diesel Engine

MOUNT THE ENGINE firmly and fit the propeller on the shaft by slipping it in position, turning the engine until the piston can be moved no further against compression, and tightening the prop nut with the propeller pointing at "twenty-to-two" as on a clock. Left handed people should treat this as "ten-to-four". Now swing the prop over in an anti-clockwise direction. The engine is dry, stiff and there is little "feel" about it. Fill the tank, open the needle valve by unscrewing it the required number of turns from fully closed, and choke the engine. This means placing the spare forefinger over the carburettor, and rotating the prop one turn. Engines with the carb. in front will indicate that fuel is entering the engine as you observe the flow through the tubing. Should there be a conglomeration of bubbles in the pipeline, then we must choke again to get the line full of fuel. Now trying another swing at the prop. Don't be afraid of it, it certainly will not fine mist of fuel throughout the moving crankcase with a mixture, and creating a fine mist of fuel throughot the moving parts. This little amount of lubrication will change the engine from a lifeless object to something with the urge to "go", and as you continue to swing the prop, you'll find there is an active "plop" as compression drives the prop over.

Choke again, and repeat the swing at the prop only this time putting a real effort into it. Start by putting your forefinger against the topmost blade, about halfway along and push the prop over compression with a smart swing of both wrist and arm. At the same time take a firm grip on the compression screw at the cylinder head, and hold this set at the position indicated in the instructions. After a few sharp flicks of the prop, there should be some reaction in the form of a mild firing stroke—or if you are extraordinarily lucky, the engine may burst into full song straightaway.

If the engine refuses to show any inclination to work, look through the exhaust ports and see if the top of the piston is at all wet with fuel. If it is, then use the compression screw as though you have your hand on the pulse of the engine, treat it as you would a human, and raise the compression by screwing in the "vernier" as one maker calls the tommy bar or comp. screw. But do not be forceful for over-compression is dangerous, and is signified by a hydraulic lock when it is impossible to rotate the propeller. This also indicates that our choking has been too generous, the cure being to set the piston at the bottom of its stroke, and to blow hard through the exhausts to clear the excess mixture, and to release compression.

Should the piston be completely dry on inspection through the ports, then the choking has not been sufficient, or the needle valve setting is not open enough It is better to err on the rich or "open" side for first starts — providing you release the comp. screw when compression seems too great.

After a while, you get into the swing of things, and soon you are rewarded with a start. Once the engine has begun to run, leave it as set for a few seconds and take stock by watching the exhaust and listening to the note. Smoky, rich exhaust is cured by screwing in the needle valve, and a staccato misfire indicates the need for more compression. Most engines start for the first time in this condition, and will not harm themselves if allowed to run rich. Should the note sound laboured, gradually dying aff in r.p.m., then the engine is over-compressed to some degree, and the comp. screw must be slackened off.

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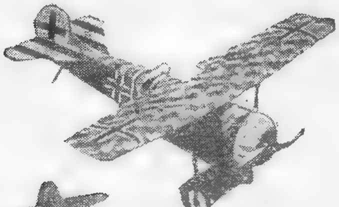
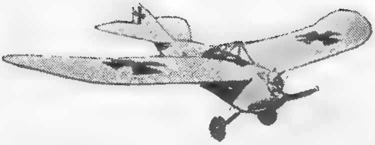
Free Flight Scale





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This model put up an impressive performance at the Nationals. Despite its small size it is quite happy in breezy conditions. Span 27 in. Suitable for 0.5 c.c. engines (Sept. 1961).
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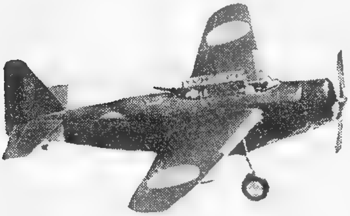

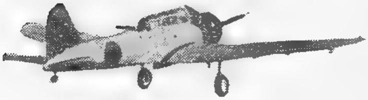

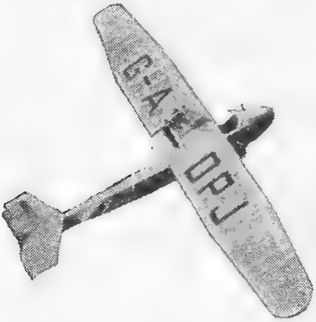

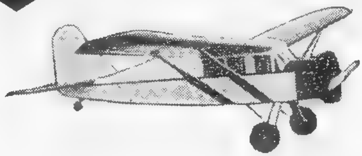

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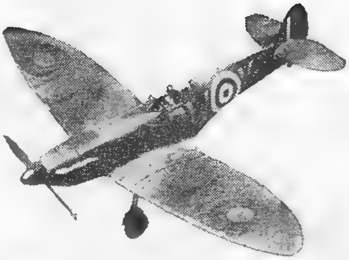
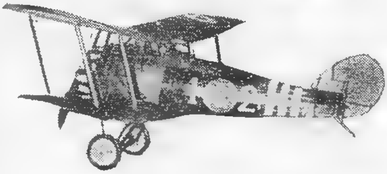
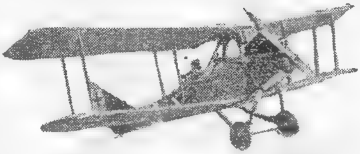
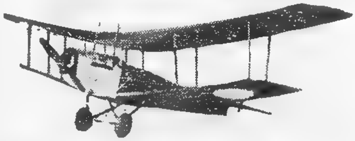
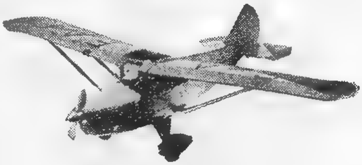
MA/318 A. * 3/6

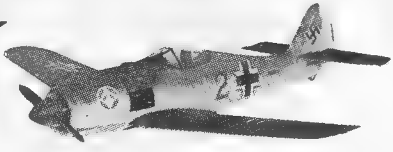












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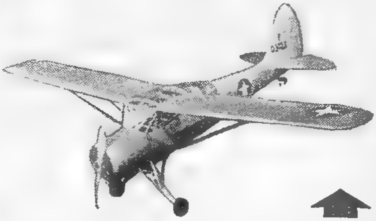

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FSP/372 F. * * * 5/6

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FSP/319 D, E, F. * * * 7/6

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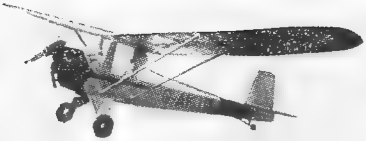

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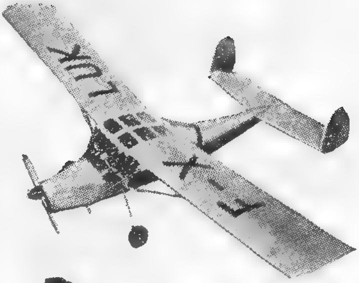
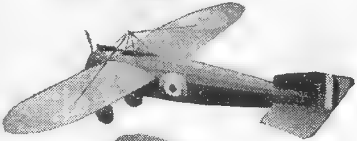
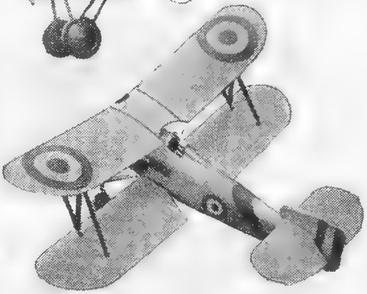
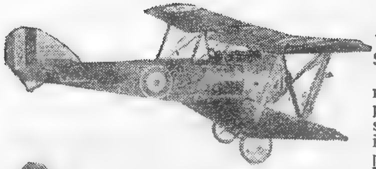
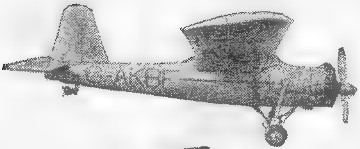
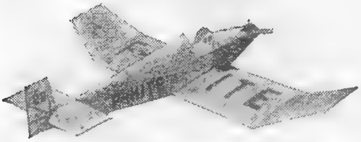


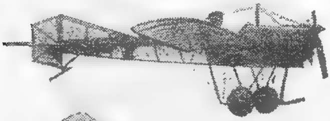


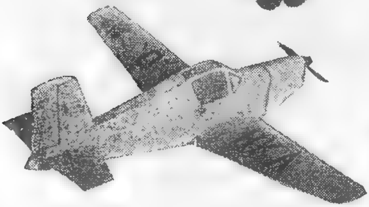












Scale Power

SOPWITH PUP By K. McDonough

A 1/12th scale model of a famous W.W.I. machine. Full colouring details given on plan. Span 26½ in. Engines 0.5-0.8 c.c. Designed by a real enthusiast for scale, who is a stickler for accuracy. One of the most popular free flight scale designs in A.P.S.

FSP/750 B, C * * 6/6

CESSNA BIRD DOG

By E. Fearnley

High wing cabin model of 36 in. span. Pleasing lines are developed from a simple sheet balsa fuselage construction.

FSP/568 B or C * 5/-

PRESTWICK PIONEER II

By R. Burns

A 52 in. version of this ideal subject. Robust and very practical design.

FSP/425 F, G * * 5/6

SPITFIRE LF XIV

By P. Whittaker

Near scale version of the famous low altitude fighter with robust construction, knock-off wings, and engine off-set, cleverly incorporated in construction. Wing span 26¾ in. Also suitable single channel R/C.

FSP/607 C, D * * 5/-

JODEL D.9 BEBE

By Hoh Fang-Chiun

Neat replica of the famous French lightplane with pendulum or "fixed" rudder. Detachable 38½ in. wing, easy structure and a super flyer.

FSP/591 B, C * * 4/6

BLACKBURN 1912 MONOPLANE

By A. M. Finucane

Perfect ⅛th scale, 48 in. span model of a pioneer monoplane, this "old-timer" will fly as well as any of its modern counterparts.

FSP/567 C or D * * * 6/-

H.K.I. By John Coasby

Low-wing authentic scale model of a Finnish home-built lightplane with racy lines. 45 in. span and specially suitable for low power, slow flying.

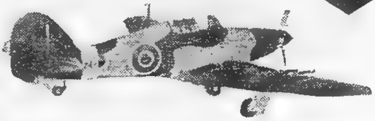
FSP/637 C, D, E. * * 5/-

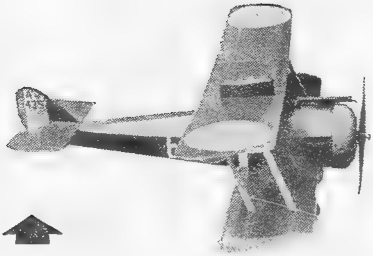
HAWKER HURRICANE

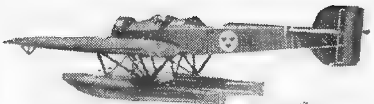
By R. Meixell

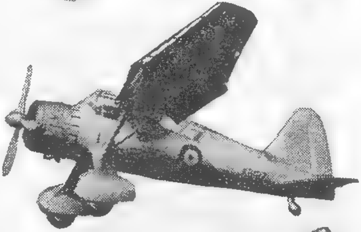
A detailed 40 in. span true scale replica of the famous W.W.II fighter for .8-1.5 c.c. engine. Detailed cockpit and markings are for "The Last of the Many"—one piece model—1/12th scale.

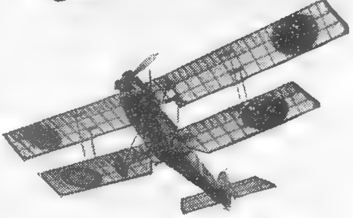
FSP/862 C, D. * * * 10/-











AIRCO D.H.5 By C. M. Milford

An inch to the foot version of the back-stagger D. H. biplane, rugged construction with knock-off parts. 25½ in. span, this model is extremely robust.

FSP/879 B, C. * * 6/-

HEINKEL He5 (S5) HANSA

By AEROMODELLER Staff

Unique flying scale subject of a Swedish Air Force floatplane with very simple construction. Can also be flown over grass for smooth landings on its large floats. Wing span 38 in.

FSP/608 C, D * * 5/-

ALBATROS D.V. By J. D. McHard

Finest of all A.P.S. single-engined scale model plans, this elegant ⅛th scale model of the famous 1917-1918 fighter is extremely accurate and one of the most attractive models in the air. Sheeted fuselage and full colour detail. Span 44 in.

FSP/646 C, D * 5/-

TIGER MOTH By A/M Staff

A magnificent 44 in. span model of one of the best known aircraft ever. Flies extremely well with magnificent air of realism. ⅛th scale

FSP/555 D, E or F * * 6/-

WESTLAND LYSANDER

A completely redesigned and modernised version of an old favourite, and a most impressive model. Span 60 in. Not recommended for R/C.

FSP/160 G * * 8/6

R.E.8 By D. R. Hughes

Span 43 in., this is a 1/12th scale model of the famous W.W.I "Harry Tate" two-seat observation and reconnaissance aircraft.

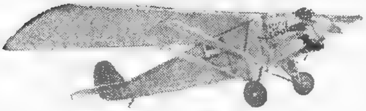
FSP/418 C, D, E * * 5/-

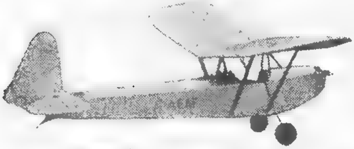
DART KITTEN By John Lamble

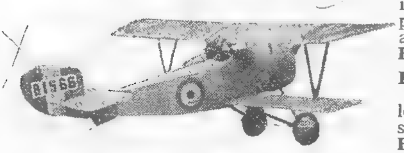
Easiest to build scale power model in our range, a 32in. span version of the popular light plane with pendulum rudder.

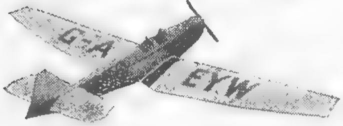
FSP/497 D. E. * * * 5/-

Scale Power









FOKKER E.IV By C. F. Edwards
Accurate 1 in—1 ft. model of the famous Eindecker. Simple construction with excellent flying characteristics. Span 36 in.
FSP/551 **B or C** ** 4/6**

RYAN NYP By R. G. Moulton
The famous "Spirit of St. Louis" in perfect scale with rib for rib or alternative simple wing structure; 34 in. span, knock-off wing on what is virtually a square box fuselage.
FSP/663 **B, C** ** 5/-**

LUTON MINOR By E. Fearnley
A large, light scale model of a popular ultralight aircraft, and one of the easiest scale models in the A.P.S. Span 42½ in.
FSP/534 **C, D.** * **5/-**

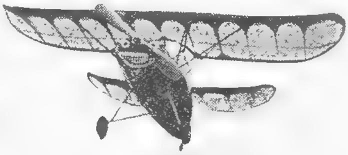
B.E.2e. By K. McDonough
Lightweight and with large wing area, this 1/12th scale 40¼ in. model of the W.W. 1 reconnaissance aircraft flies slowly and is extraordinarily stable. Copious detail on the plan including the gun and camera!
FSP/721 **C, D.** ** 7/6**

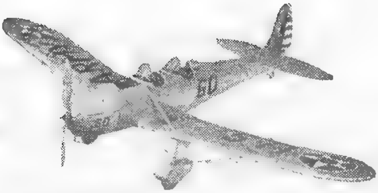
BISHOP'S NIEUPORT 17c
By L. C. Bagley
One-eighth scale model of the famous French fighter used by R.F.C., etc. For experienced builders, but pendulum rudder makes flying easy. Span 41½ in.
FSP/285 **D, E.** *** 5/6**

FOCKE WULF STOSSER
By B. Barton
Pre-war German trainer has novel insignia, makes a fine, stable flyer with pleasing lines, stringered fuselage, detachable wing halves. Span 42 in.
FSP/617 **C, D.** ** 4/9**

B.A. SWALLOW By J. W. Coasby
Authentic 50 in. span model of a popular low-wing lightplane. Pendulum rudder, simple construction and detachable wings.
FSP/560 **B, C or D.** ** 5/–**

H.M.300 By A. I. Howe
A novel flying scale model of an aircraft that was developed from the original Flying Flea. For 0.75 c.c. motors. Span 26 in.
MA/213 **C, D.** ** 5/-**





CURTISS OWL

By J. Bridgwood

A fine flying scale model for 0.75–1 c.c. engines. 41-in. span.

MA/159 C, D, E. * * 6/-

RYAN P.T.20

By G. Cannon

One of America's most popular Service aircraft modelled to 1½ in.—1 ft. scale, 45 in. span, this low-wing design is really easy to handle.

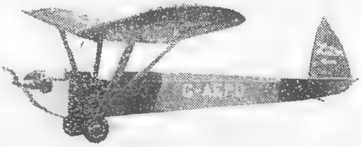
FSP/554 C or D * * * 6/-

P. Z. L. P-24 FIGHTER

By D. F. Bryant

An inch to the foot version of the gull wing fighter, built for fast flying, with knock-off parts and pendulum elevators. 35 in. span, this model is extremely robust.

FSP/487 E, F. * * 6/-



LUTON MINOR (Prototype)

By Walter E. Mooney

A 22¾ in. span replica of a famous lightplane for the diminutive engines. Flies well with Davies Charlton Bambi and Cox Pee Wee engines.

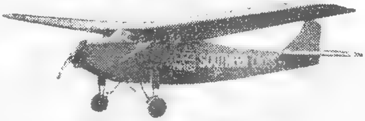
FSP/697 A, B * * 4/6

CHILTON D.W.I

By J. M. Greenland

A sturdy replica of the interesting low-wing monoplane, to 1½in.—1 ft. scale. Span 36 in.

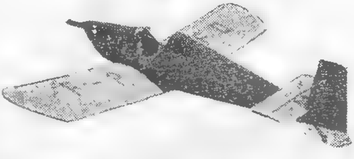
FSP/340 B, C, D * * 3/6



FOKKER FVIIb 3M SOUTHERN CROSS

A famous between-wars aircraft. The model uses one motor, with dummy airscrews on the outboard engines. Span 40 in.

FSP/445 B * * 6/-

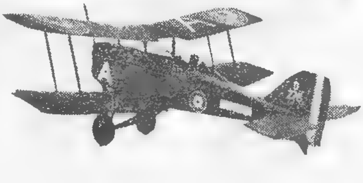


DRUINE TURBULENT

By Ron Moulton

A French home-built lightplane in minature. Most realistic in flight, easy to build and foolproof to fly. Wings slots aid stability. Wing span 32 in.

FSP/613 B. C. * * 3/-

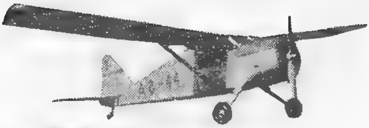


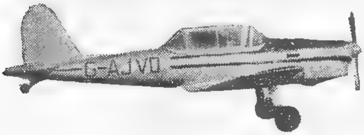
S.E.5a

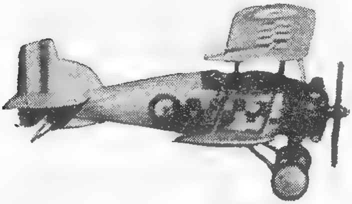
By J. D. McHard

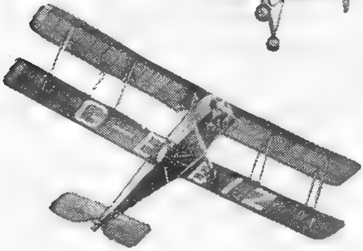
Mick Mannock's famous fighter in full detail on specially-printed plan with copious instructions, ten photo illustrations. Fine performer with touch construction. Span 27 in. Also suitable for R/C.

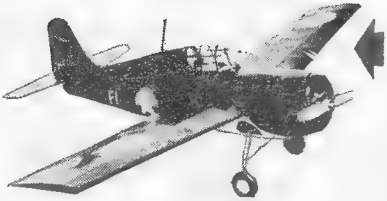
FSP/682 B. C. * * 5/-











DE-HAVILLAND D.H. C.2 BEAVER

By A. Moore

A beautiful scale version of an ideal subject for model flying. Slabsided, with but one wing strut and cantilever undercarriage. Span 60 in.

FSP/388 **E, F, G.** * **5/6**

AVRO AVIAN SPORTS

By R. Booth

Accurate model of a popular light aircraft of the early '30's and one of the simpler biplane prototypes. Span 35 in.

FSP/468 **C, D.** * * **6/-**

D.H.C.-I CHIPMUNK

By J. M. Greenland

Masterpiece of low-wing scale model design, and most realistic in flight. Span 51½ in.

FSP/290 **D, E.** * * * **7/6**

GLOSTER GAMECOCK II

By P. E. Norman

A 36 in. 1/10th scale version of the famous 1926 fighter arranged for free-flight aerobatics by pendulum control. Tough structure and crash-proof design.

FSP/410 **F, G. (radial)** * * * **7/6**

ZAUNKOENIG

By J. Greenland

39 in. version of the German experimental parasol lightplane, fully slatted, complete with instructions.

FSP/392 **B, C, D.** * * **5/6**

AVRO 504K

By R. Booth

This one-twelfth flying scale model is one of the finest designs yet produced. Winner of many contests, the realism of this machine is remarkable. Span 36 in.

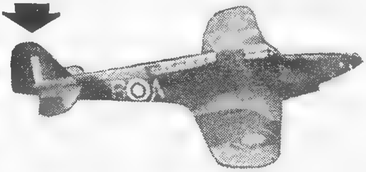
FSP/343 **C, D** * * **5/6**

FAIRY FULMAR

By M. F. Hawkins

Free-flight scale model for the Cox 010. Span 30 in.

MA/363 **B.** * * **3/6**



WILDCAT
By E. Fearnley

This 29-in. span flying scale model is a rugged model of the famous World War II U.S. fighter; suitable for 0.5–1 c.c. engines.

MA/184 C, D. * * 5/-

LUSCOMBE 8A "SKY PAL"
By F. Lees

A contest winner both for appearance and quality flying. Has many " knock-off " features and can be dismantled for easy transport. Full booklet of gen with each plan of this outstanding 63 in. scale model.

FSP/503 E, F. * * 6/-

CESSNA 172
By W. P. Holland

This 72 in. 1/6th scale model of the popular American lightplane is the answer to those who want an easy to build large model for radio conversion. Knock-off wings and shock absorbing trike u/c.

FSP/668 G, H. * * 10/-

SOPWITH TRIPLANE
By V. King

35 in. scale model of a famous W.W.I fighter for builders with a little experience. Features pendulum rudder and complete accuracy. 1/9th scale.

FSP/545 C, D. * * 6/-

V.A. WALRUS
By AEROMODELLER Staff

38 in. span perfect scale model of famous war-time amphibious pusher. Sheet hull constructionn and detachable wings make it a tough design for over land or water flying.

FSP/661 C, D. * * 7/6

CHRISLEA SUPER ACE
By E. J. Riding

This tricycle undercart, high-wing design lends itself admirably to flying. Simple construction. Span 54 in.

FSP/331 C, D * * 5/6

AUSTER B4 AMBULANCE
By A. A. Stowell

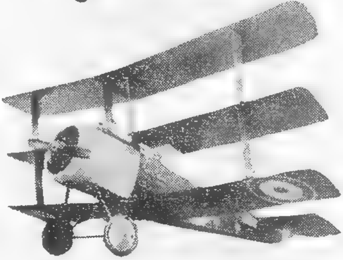
55 in. span, the roomy fuselage of this ambulance freighter proves excellent for radio-installation.

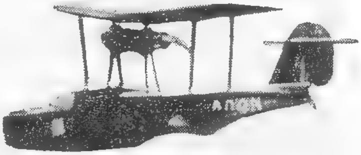
FSP/531 D, E. * * 6/-

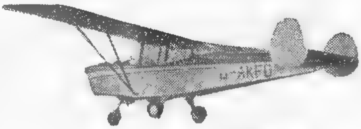
SISKIN 111a
By P. E. Norman

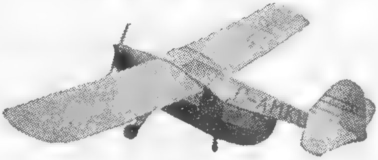
A superb scale free-flight model of advanced design for 1.5–2.5 c.c. engines with authentic flight characteristics. Span 36 in.

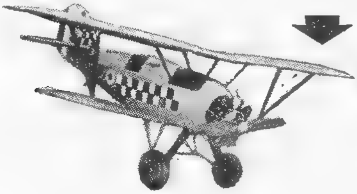
MA/314 F, G. * * * (Two sheets) 10/-



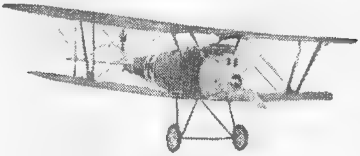








Scale Power

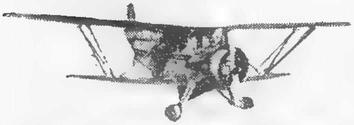


PFALZ DIII

By F. Palmer

Superb details in this German W.W.I. fighter design by Canadian modeller from Calgary. Is a beautiful flier, realistic in every way, yet practical in construction. Ideal project for those who already have other W.W.I. free flight scale models. Span 46½ in. for 1.5 c.c. or low power 2.5 c.c.

FSP/775 **F,G** * * * **10/-**

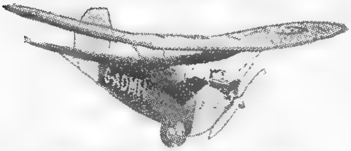


WACO YQC-6

By R. Meixell

Superb one-ninth scale model of the 1936 Waco Custom Biplane. Model features, padded seats, cloth upholstery, veneer trim, and scale structure. The most detailed F/F scale plans yet with all interior detail. For advanced builders only, 45 inch span.

FSP/844 **E.F.** * * * * **15/-**

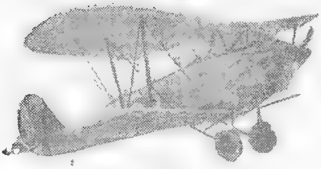


CARDEN-BAYNES "FLYING FLEA"

By F. G. Longbon

A superb model of this challenging subject in exact scale, performs just like the real plane, with its tandem wings and slow flight. 44 inch span, makes it one-sixth scale.

FSP/853 **D. E.** * * **9/-**

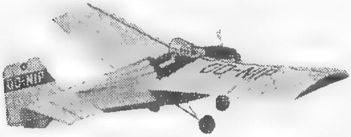


BRISTOL BULLDOG

By P. J. Allnutt

From Canada comes this 1/12th scale model of the famous "Bulldog". The machine uses some spruce and ply in its rib for rib, stringer for stringer construction. Full colouring and marking details given on plan. Winner of many Canadian scale competitions. Span 33¾ in. Engines 1-1.5 c.c.

FSP/762 **D, E.** * * * **7/6**

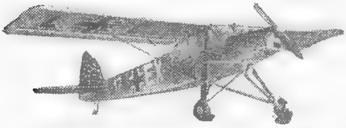


TIPSY NIPPER

By C. C. Badger

Free-flight; but capable of C/L or even R/C conversions, this simplified version of the Tipsy prototype has perfect modelling proportions. Span 37 in., detachable wing halves.

FSP/731 **C, D.** * * **5/-**



FIESELER STORCH

By P. L. Whittaker

German observation plane in true scale with characteristic slats, flaps and stilty u/c. Stringer fuselage construction, detachable wing halves. Span 46½ in. Full single channel R/C details.

FSP/669 **C, D.** * * **7/6**

SOPWITH CAMEL

By F. C. Saunders

The Camel needs no introduction to flying enthusiasts, and this 25 oz., 42 in. model captures the atmosphere of this historic fighter. 1/8th scale.

FSP/441 **D, E.** * * * **6/-**

HAWKER HIND TRAINER

By D. Marsh

The dual-control version of one of the immortal Hart variants. This accurate 38 in. replica is one of the most realistic scale models ever.

FSP/476 C. * * * 6/-

F. E. 8

By V. King

The '14-'18 fighter in miniature. pusher engine, detachable boom tail supports, pendulum rudder, and high degree of stability are features of the most unusual 39½ in. span scale model.

FSP/495 C * * 6/-

WESTLAND WIDGEON III

A complete revision of the popular rubber driven design by Eddie Riding for small motors. Span 36½ in.

FSR/P/211 * * 3/6

SOPWITH SWALLOW

By John Darnell

A fine 1/8th scale version of a little known fighter of 1918, which forms a perfect mate for the other Sopwith types in our range. 41 in. span and with the characteristics of a sport model, it is fine for the beginner scale enthusiast.

FSP/625 E, F. * * 6/6

S.P.A.D. S-7CI SCOUT

By L. C. Bagley

A perfect scale version of the attractive 1914-18 fighter. Span 38 in. 1/8th F.S. scale.

FSP/373 D, E. * * * 5/6

HANDLEY PAGE H.P.42

By Cpl. S. Newton

The fabulous "Hannibal" London-Paris Airliner for either control line or free-flight, 2 or 4 engines. Very detailed drawing for this 65 in. model, makes light work of the involved structure. Recommended for all scale enthusiasts.

FSP/615 2x C, D. (Free Flight) * * * 8/6

HANRIOT H.D.I.

By B. J. Rogers

A simple to fly tough one-twelfth scale model of the famous Belgian W.W.I. fighter, 28-inch wing span. Ideal choice for a scale "beginner."

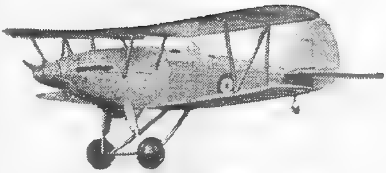
FSP/837 B * * 6/-

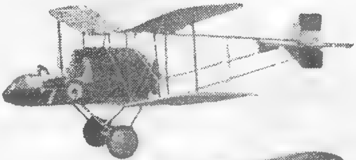
BUHL SPORT AIR SEDAN

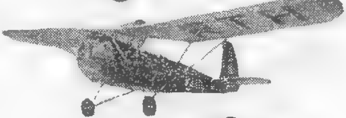
By H. G. Bowers

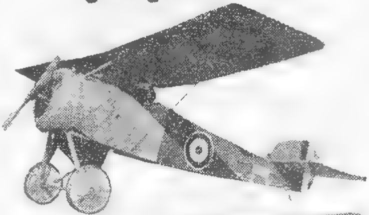
A "fun" scale replica of this famous Sesquiplane aircraft 34½ in. wingspan for 0.020 engines.

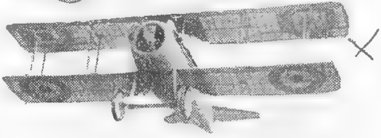
FSP/899 B, C. * * 3/6

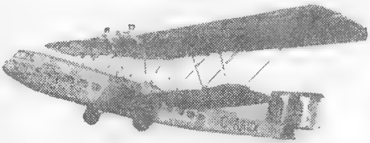


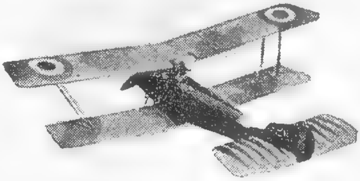


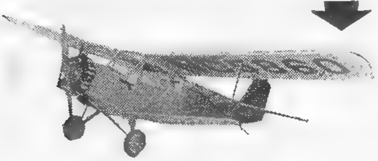


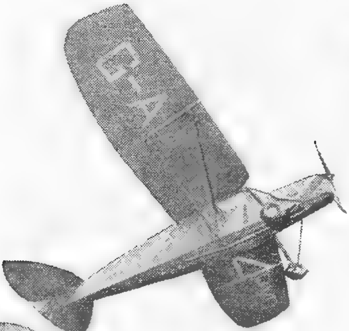


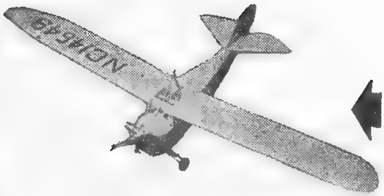


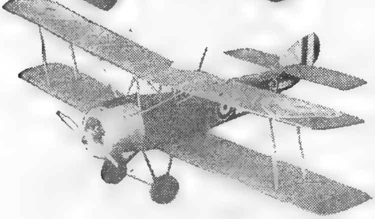












D.H. 80 PUSS MOTH

By F. G. Longbon

Super detail drawing with cockpit and markings, make this 52 in. span 1½ ins. to the 1 ft. early light plane model a scale fans delight. Knock-off wings, etc.

FSP/891 F. * * * **10/-**

SOPWITH 1½ STRUTTER

By I. Rae

One-twelfth scale, knock-off wing version of this famous W.W.I. fighter. Span 33½ ins., for .5-1 c.c. engines.

FSP/907 * * **7/6**

COLONIAL SKIMMER

By E. Fearnley

Designed by an acknowledged expert, this model will appeal to flying scale enthusiasts who want something different. For 0.75–1 c.c. engines.

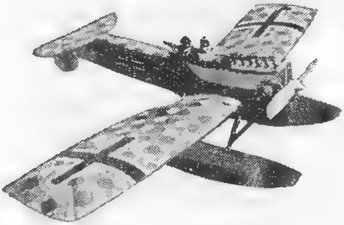
MA/250 C, D. * * * **6/–**

BRANDENBURG SEA MONOPLANE

By A. Warren

A really original scale model of the World War I German seaplane. Span 35 in. for 2.5 c.c. motors.

MA/343 G. * * **6/-**



Star Plan Grading

* A simple design with sufficient detail and explanation for the complete beginner;

* * Slightly more advanced, for the average modeller or beginners with some modelling experience in other fields.

* * * For modellers of some experience, or those who have built one or two similar models or are prepared to read up constructional technique.

* * * * For the expert able to interpret drawings (e.g., 3-view drawings) and decide his own constructional methods; also used for designs where workshop equipment is called for.

AERONCA C-3 By P. M. H. Lewis

A free-flight scale model of an attractive pre-war light plane for 0.5-0.9 c.c. engines. Span 36 in.

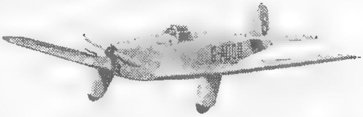
MA/285 **B, C, D.** * * **5/-**

BUCKER JUNGMEISTER

By W. Lister & W. Newman

An easy to build 26¾ inch span free flight scale model for .5-.8 c.c. engines. This is the In-Line engined version of the aircraft, considered to be one of the finest aerobatic mounts available.

FSP/807 **C.** * * **6/-**

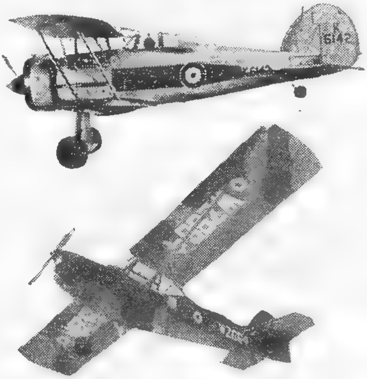


MILES HAWK SPEED SIX

By D. P. Golding

A successful low-wing scale power model of one of the outstanding Miles racing designs. Scale flight appearances. Span 52 in.

FSP/434 **F, G.** * * * **6/-**



GLOSTER GLADIATOR

By J. D. McHard

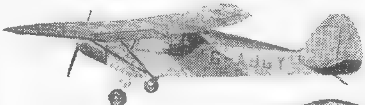
This 32 in. model is to 1/12th scale, has a wealth of detail on the plan, is authentic to the last rib position and truly deserves a high rating in our range. A scale contest winner that flies just like the real thing.

FSP/719 **C, D.** * * **7/6**

AUSTER A.O.P.9 By R. G. Moulton

36 in. scale version with all sheet fuselage and tail assembly, simple wings. Flies like the real thing, aerobatics or sport flying.

FSP/580 **B or C** * **4/6**

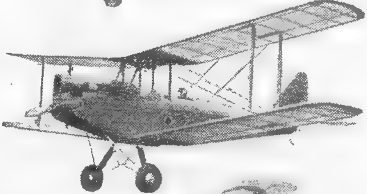


PIPER SUPER CRUISER

By D. Garrett

A 1 inch to 1 ft. scale, 35 in. span model of a famous American lightplane. Intricate, though not complicated rib for rib structure as something for a "builder" to get his teeth into. For the popular diesels and glow motors of .3-.8 c.c. (.020-.049 cu. in.).

FSP/832 **B, C.** * * **6/-**



D. H. GIPSY MOTH

A revised plan of an old favourite, and a very successful rudder only or multi control radio model, for which details are given. Span 60½ in.

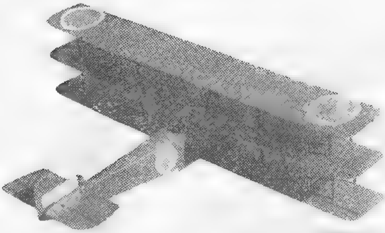
RC/135 **H, J, K (radial)** * * **17/6**

SOPWITH TABLOID

By K. McDonough

The diminutive Tabloid makes an ideal scale subject and perfect 1/12th scale little Free Flighter spanning 25½ inches for .3 to .8 c.c. engines.

FSP/810 **B, C.** * * **7/6**



MITSUBISHI TYPE 10 WRIGHT MARTIN M5

By M. F. Hawkins

A two in one plan for **round-the-pole scale models,** of the Mitsubishi type 10 carrier borne fighter of 17½ in. wingspan, bomber and torpedo attack triplane of the Japanese Navy and a 22 in. span model of the little known Wright Martin M-5 WW1 monoplane which was produced for the U.S. Army.

RTP/942 **B, C.** * * **6/-**

NIEUPORT 17

By D. M. Collins

A one twelfth scale model of the well known WW1 allied fighter aircraft. Features pendulum control and is suitable for lightweight R/C. 27½ in. wingspan.

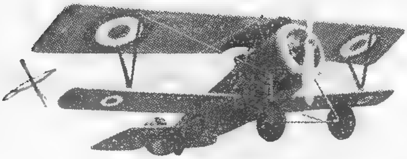
FSP/951 **B, C.** * * * **6/6**

AW FK4 (Big Ack)

By G. F. Elsegood

A little known WW1 reconnaissance type, modelled at one twelfth scale to give a realistic stable flyer of 45½ in. wingspan.

FSP/960 **C** * * **7/6**

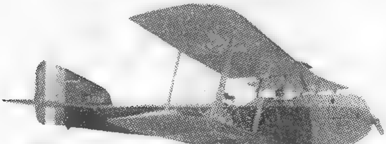


AVIS

By G. F. Elsegood

Simple scale model of the little known light plane of the mid-20's, a charmer in the air, easy to trim. 30 in. wingspan.

FSP/937 **C** * * **3/6**



FOKKER DVII

By J. D. McHard

29 in. scale model for R/C or free flight, .5-1 cc, very popular design. See also SE5, p. 19.

FSP/916 **B, C, D** * * * **4/-**

DART PUP

By W. P. Holland

1/8th scale version of this high wing pusher lightplane with 44½ in. span is remarkably stable in all conditions Simple sheet fuselage construction.

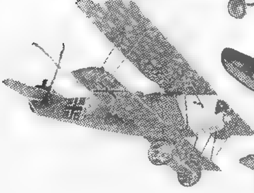
FSP/620 **B, C, D** **6/3**

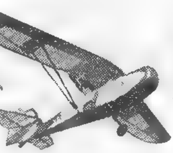
MORANE PARASOL

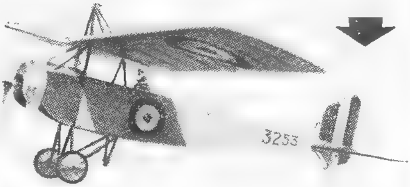
By D. Rattle

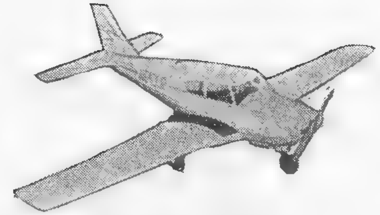
R/C or F/F of Warneford VC's Zeppelin buster 34 in. for .8 cc.

FSP/924 **B, C** * * **3/6**









PIPER COMANCHE (Free Flight)
By P. M. H. Lewis

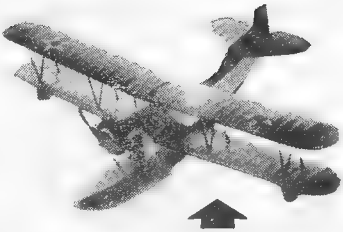
A 1 in. to 1 ft. scale free-flight model of a popular light plane. Designed for 0.75–1 c.c. motors. Span 36 in.

MA/317 **C, D, E.** * * 5/-

By P M. H. Lewis
CESSNA AIRMASTER

A high-wing cabin monoplane with exceptional flight performance. Construction is simple. Span 33 in. Suitable for 0.5–0.9 c.c. motors.

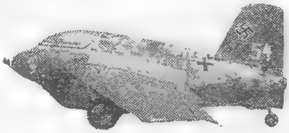
MA/308 **B, C, D.** * 5/-



LOENING OL-9 By C. F. Stuby

Unusual 47 in. 1/12th scale bipe flying boat of pre-war U.S. Navy, simple construction with detachable wings.

WP/650 **E, F.** * * * 7/6

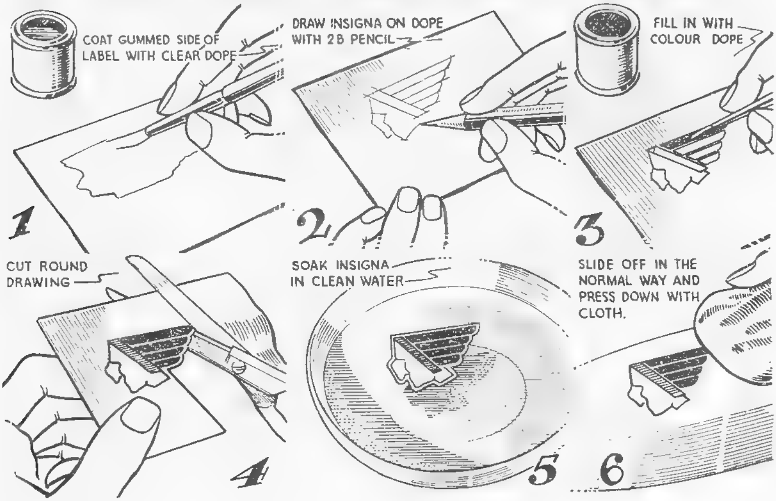


MESSERSCHMITT Me 163
By D. Rattle

Unique scale **glider**, unusual construction, 30½ in. span.

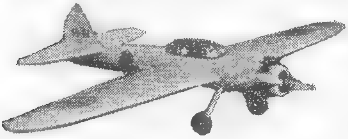
G/917 * * 3/6

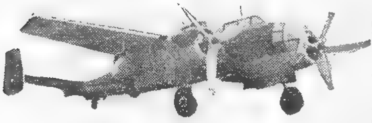
How to make Waterslide Transfers

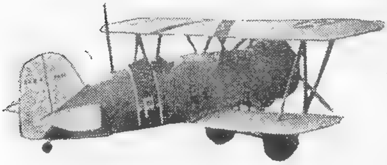


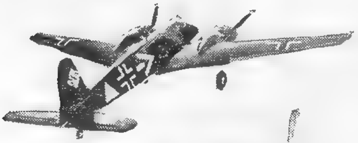
COAT GUMMED SIDE OF LABEL WITH CLEAR DOPE
1
DRAW INSIGNA ON DOPE WITH 2B PENCIL
2
FILL IN WITH COLOUR DOPE
3
CUT ROUND DRAWING
4
SOAK INSIGNA IN CLEAN WATER
5
SLIDE OFF IN THE NORMAL WAY AND PRESS DOWN WITH CLOTH.
6

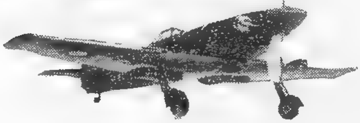
Control Line Scale











FAIREY GANNET By B. Randle

Highly detailed model for advanced builders only, contra rotating propellers driven by two engines through a split shaft. Single engine installation also shown. 40 in. span for one 6 c.c. and one 2.3 engine.

MA/380 G and K * * * * 6/6

BRISTOL BEAUFIGHTER X By B. I. Fry

A twin-engined C/L scale model for 2.5 c.c. engines. Span 39 in.

MA/275 2 x G. * * * 10/-

GEISHA GIRL By R. Brown

A semi-scale stunt model for 5-6 c.c. engines. Span 54 in.

MA/324 J, K. * * 6/-

SAAB-18A By Hoh Fang-Chiun

A scale twin-engined C/L Swedish medium bomber, suitable for two 1.5 c.c. engines. Span 40 in.

MA/300 2 x F * * * 10/-

BOEING F4B-4 By W. I. Barrett

A C/L scale model of a colourful American biplane fighter of the '30s. Span 20 in. Suitable for 1-1.5 c.c. engines.

MA/290 E, F. * * 5/-

HENSCHEL Hs.129 By P. Wheldon

Twin-engined scale control-line model of an attractive prototype. Highly detailed plan. Span 36 in. Suitable for two 1-1.5 c.c. motors.

MA/330 2 x F * * 7/6

SPITEFUL By J. R. Bishop

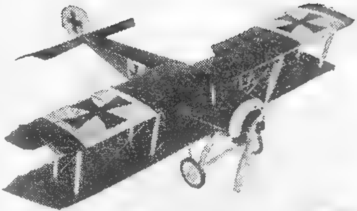
This appealing control-line scale model of a sleek descendant of the Spitfire has been designed for engines from 1.5-2.5 c.c. Span 27 in.

MA/183 F, G. * * 5/-

NORTH AMERICAN O.V.—10A By P. L. Spence

A 1 in.-1 ft. of this C.O.I.N. aircraft in production for the U.S. Army and U.S. Air Force has two bellcranks for elevator control. A fine flier this 30 in. span model makes an ideal introduction to twin engined C/L modelling. Engine 1.5-2.5 c.c.

CL/912 F, G. * * 8/6



FOKKER DIII By F. Beatty

Unusual World War I Biplane fighter to 30½ in. span, and capable of all manoeuvres with a powerful 3.5 c.c. diesel. A most attractive and colourful subject for scale contests.

CL/623 G, H * * 6/-

SPITFIRE By G. Pentland

The Mk. VIII Spitfire as used by R.A.A.F. in S.E.A.C. is made semi-scale for full stunt flying on a 29 or 35 engine. Span of 53½ in. offers ample wing area for all aerobatics, is flapped, has all latest design features incorporated by Australian design. Issued by arrangement with Kookaburra Plans Service.

CL/776 J, E, L. * * 10/–

CONSOLIDATED CATALINA

By F. H. Buckland and A. D. Kingswood

Famous wartime amphibian in any of three versions for water or land flying; any combination of engine totalling 4 c.c. or more. Wing span 63 in.

CL/606 G * * * 7/6

MACCHI-CASTOLDI MC-72

By E. Bizzozero

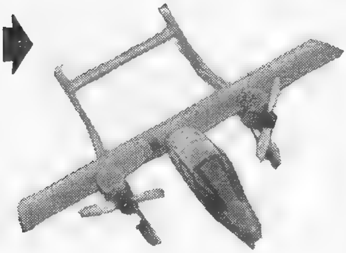
A 25¾ in. scale model of the world's fastest piston engined float plane and world speed record holder in that class. For 2.5 c.c. engines, the plan incorporates details for a contra-rotating propeller assembly.

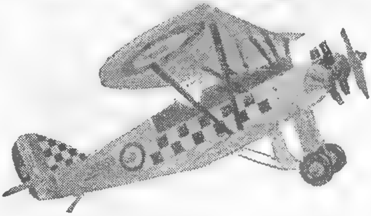
CL/788 G. * * * 7/6

SISKIN By C. B. Hall

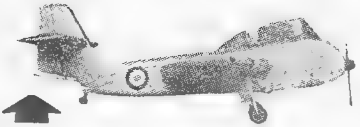
A delightful scale model of the R.A.F.'s first all-metal fighter. Robust construction allows model to take many hard knocks. Simple to build and easy to fly, this model will give hours of pleasure. Span 22¾ in. for engines 1-1.5 c.c.

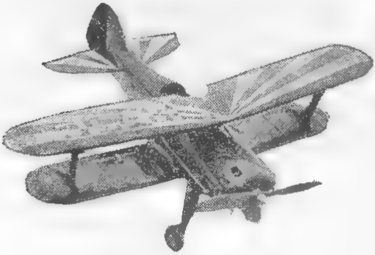
CL/742 D, E * * 5/-





Control Line Scale

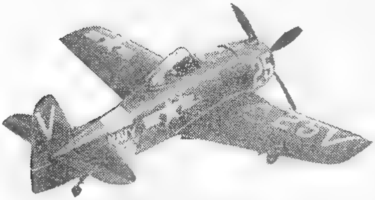




Free Flight

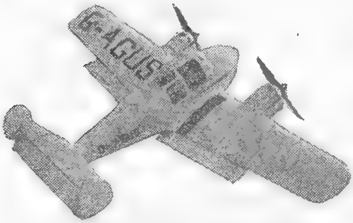
SHORT SEAMEW By E. Fearnley
A very easy to construct scale version of this anti submarine aircraft. 36½ in. span for .5 c.c. engines.
MA/218 B, C. * 5/6

PITTS LITTLE STINKER
By P. Donavour-Hickie
Scale 25½ in. span, control line model of the famous "Little Stinker" U.S.A. National Champion Aerobatic biplane. 3.5–5 c.c. engine.
MA/98 H, J. * * 5/–



GRUMMAN F8F-2 BEARCAT
By P. M. H. Lewis
The last of the famous Grunman piston-engined fighters designed for shipboard use. This scale control-line model is suitable for 1.5 c.c. diesels. Span 25 in.
MA/214 F, G. * * 5/–

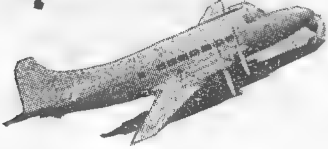
GEMINI By F. Buckland
This control-line model of an unusual prototype is powered by two 1.5 c.c. engines. In performance it is snappy enough for the expert yet easily handled by the beginner. Span 36 in.
MA/221 2 x F. * * 7/6

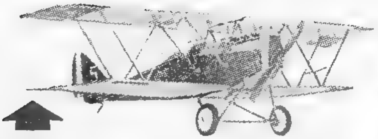


D.H. CHIPMUNK By F. Buckland
An Authentic C/L model of the famous R.A.F. training aircraft. Suitable for 2.5–5.0 c.c. engines. Span 40 in.
MA/247 G, H, J. * * 6/–

D.H. HERON By F. Buckland
An unusual model of a 4-engined air-liner for four 2.5 c.c. engines. Span 64 in.
MA/236 G, H. * * 10/6

HAWKER HART By W. Musciano
Rugged scale stunt model, 28 in. span, of a favourite between-wars two-seater maid of all work.
CL/462 H. J. * * 5/–



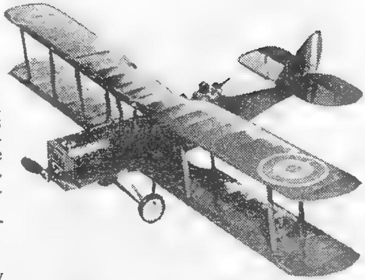


ANASLDO S.V.A.4

By Capt. C. Milani

A magnificent model of the famous Italian World War 1 fighter by the foremost C/L scale model designer in the country. For experienced modellers only. Suitable for 6–11 c.c. motors. Span 45 in. drawn on two sheets.

MA/359 K, L, M, N. * * * * 10/–

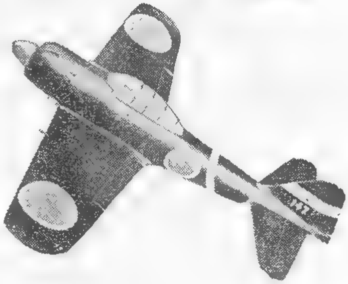


D.H.9 A

By E. Fearnley

A scale C/L model of the famous 1917 war plane for 1.5–2 c.c. motors. Span 35 in.

MA/174 F, G. * * 5/-

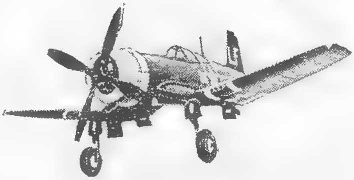


NAKAJIMA TENZAN (JILL)

By M. F. Hawkins

A scale C/L model of a Japanese torpedo bomber for engines of 2.5–3.5 c.c. Span 36 in.

MA/268 G, H. * * 7/6

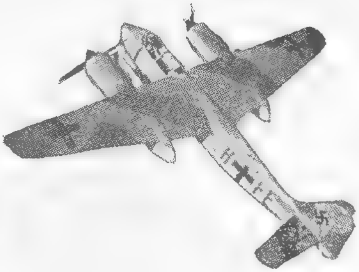


VOUGHT F4U-2 CORSAIR

By P. M. H. Lewis

C/L scale model of the famous U.S. fighter designed for 1–1.5 c.c. engines. Span 26 in.

MA/141 E, F. * * 5/-



FOCKE-WULF MOSKITO

By P. Wheldon

A fascinating and unusual subject for a twin-engined control-line model, with a proven flight performance. Span 28 in. Suitable for two 1.5 c.c. motors.

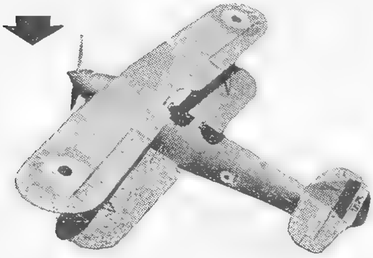
MA/319 2 x F. * * 7/6

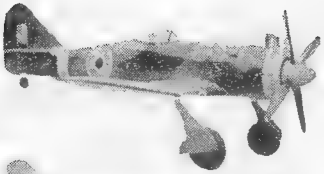
HAWKER HART

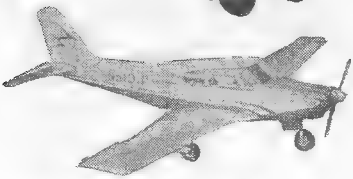
By C. Hall

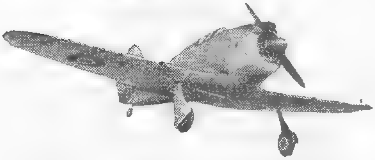
A detailed scale control-line model of the famous pre-war biplane. Suitable for 3.5–6 c.c. engines, drawn on two sheets.

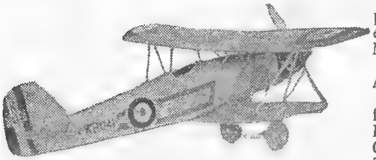
MA/374 G, H, J, K. * * 7/6

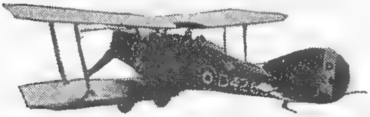


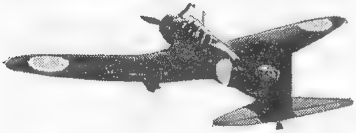












TEMPEST II

By H. J. Pridmore

Those who prefer scale fidelity with their model work will find this design, with its snappy performance, well to their liking. Span 31 in.

CL/336 **G, H.** * * **4/6**

PIPER COMANCHE

By L. Ackroyd

Winner of the scale event at the 13th New Zealand Championships, this superb 1¼ in. to 1 ft. control line replica for 2.5 to 3.5 c.c. motors, features retracting undercarriage, wing flaps and throttle control via J. Roberts Flight Control Line mechanism. 45 ins. Span.

CL/790 **G, H.** * * * * **8/6**

WACKETT BOOMERANG

By C. A. Taylor

Popular full-stunt model of a well-known war-time Australian aircraft. Span 38 in.

CL/433 **G, H (Radial)** * * **5/-**

HAWKER FURY

By Clive Hall

A 20 in. span model of the famous between wars fighter. Spritely performance with moderate stunts make it a most rewarding project for 1.5 c.c. engines. Extensive sheet areas make for easy and quick construction.

CL/745 **E, F.** * * **5/-**

MARTINSYDE BUZZARD

By M. F. Hawkins

A scale C/L model with excellent "stunt" performance when powered by 5–6 c.c. engines. Span 32 in

MA/327 **J, K.** * * **7/6**

AICHI 99 "VAL"

By P. Wheldon

A super scale C/L model (scale 1 in. to 1 ft.) of a Japanese Navy dive bomber. Placed second in the British National Championships. Span 39 in. Suitable for 2.5– c.c. engines.

MA/349 **G, H, J.** * * * **7/6**

BELL P.39 AIRACOBRA

By B. Reggiano

Scale control liner of this mid-engined W.W.2. fighter, has also placed high in Air Races. Span 27 in. for 2.5 c.c. engines.

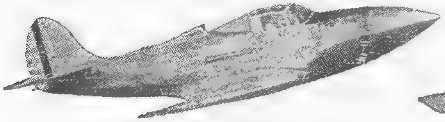
MA/251 **G.** * * **5/6**

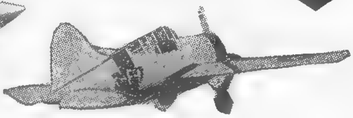
BREWSTER F2A-I BUFFALO

By P. Wheldon

A super detailed scale control-line model of this famous World War II fighter, wingspan 37 in. Suitable for 3.5–5 c.c. engines.

MA/367 **H, J.** * * **5/6**



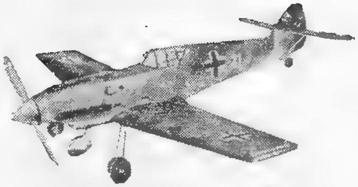


MESSERSCHMITT Me 109

By A. D. Kingswood

World War II fighter to 24 in. span with inverted engine, all sheet covered surfaces, tough construction and ideal for sport flying. Original had 1.5 c.c. diesel.

CL/709 E, F * 5/-

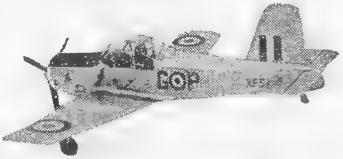


HUNTING PROVOST

By Clive B. Hall

17½ in. wingspan near scale model of the R.A.F. piston-engined trainer with ultra-simple construction including all sheet wing and tail surfaces. Has an inclined engine mounting at 45 deg. and plan includes full information on a remote-controlled pylon to enable any model of this size to be piloted in true manner from outside the flying circle.

CL/720 B, C * 3/6

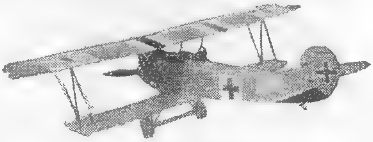


FOKKER D VII

By R. Ward

An accurate scale stunter by an expert in this branch of C/L flying. Span 29 in., fully stuntable, simple construction. 1/12th scale.

CL/403 H, J. * * 5/-



SOPWITH 1½ STRUTTER

By B. Sichi

Super semi-scale stunter for big engines that will fly through all manoeuvres with ease. 48 in. span gives generous wing area, gun and marking details on plan.

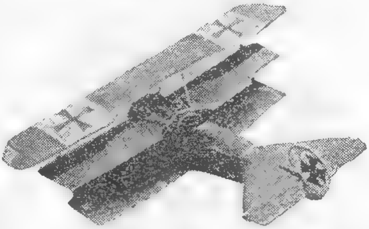
CL/651 H, J, K. * * 7/6

FOKKER TRIPLANE

By W. Musciano

Simple, foolproof construction includes line-up strutting for wings. The Triplane has a character of its own. 23½ in. span. 1/12th scale.

CL/307 G, H. * * 5/-

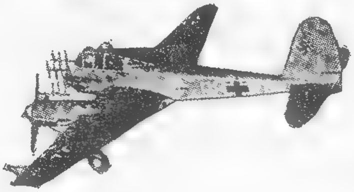


MESSERSCHMITT Me 210

By J. E. D. Mackie

A twin engined low wing scale model of the German W.W.2. light fighter/bomber. All sheet covering, with engine throttle control details.

MA/395 G, H. * * 8/-

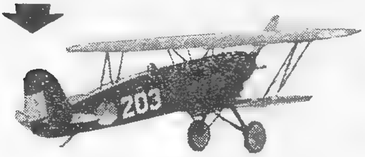


FOKKER DXVII

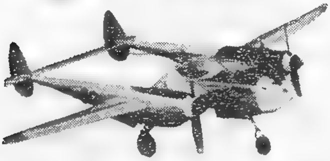
By C. Kempen

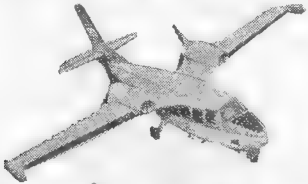
Between the wars biplane fighter with very desirable proportions including long undercarriage. Plan has detail for Dutch Air Force markings. Capable of mild aerobatics. 30 in. wingspan.

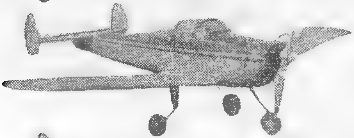
CL/712 G. * * 5/-



Control Line Scale







LOCKHEED SIRIUS

By W. Musciano

Flying scale model of the famous American machine, this version can be fitted with either floats or wheel undercarriage. Span 32 in.

CL/328 H, J * * 3/6

SHACKLETON MR3

By J. M. Bodey

A 61 in. span multi engine model of the famous tricycle undercarriage version of the "Shack." Simplified structure. For any engine combination total of 5-6 c.c. A sure crowd pleaser and a good flier, even after one or two engines have cut out.

CL/746 E, F, G * * * 8/6

D. H. MOSQUITO

By A/M Staff

A beautifully accurate scale control-liner of 40 in. span, suitable for any pair of diesels totalling more than 4 c.c. All sheet covered and extremely robust.

CL/570 F, G or H * * 7/6

LOCKHEED P38 LIGHTNING

By A. Troberg

39 in. span twin for wide range of engines to perfect scale with simple structure and high speed performance.

CL/671 E, F, G * * 7/6

PIAGGIO P.166

By W. P. Holland

Control line scale model of a famous Italian executive aircraft of most pleasing and out-of-the-rut shape, featuring Gull wing, nosewheel undercarriage, swept fin and twin pusher engines. Span 42 ins. for two 1-1.5 c.c. engines.

CL/824 two D, E, F. * * 11/-

ERCOUPE

By D. Deeley

A scale stunter, accepted for publication after six months development in detail design. Will do all aerobatics except square loops. Span 39½ in., 262 sq. in. area.

CL/385 H, J * * 5/6

VICKERS VISCOUNT 701

By J. M. Bodey

Queen of all the scale controliners, this 1/18th scale, 62¾ in. span beauty is a great favourite. Colour livery for BEA, Capital and Air France. Relatively simple structure. For a combination of 7 c.c. in engines. Original used two 2.5, two 1.5 c.c.

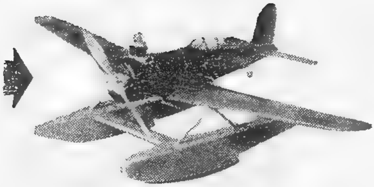
CL/701 F, G, H Multi * * * 8/6

Not illustrated.
(See F.S.P. Section)

SOPWITH TRIPLANE

French version of the popular British "Tripe", this little machine is delightful to handle. Span 20 in.

CL/361 D, E, * * 5/-



LOCKHEED P2V-7 NEPTUNE
By J. M. Bodey

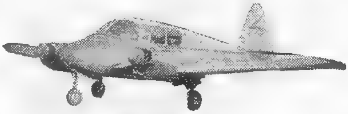
An exciting and unusual 37½ in. span twin engined scale control line model for two .8-1.5 c.c. engines. Tricycle U/c and all sheet covering.

CL/783 two of C, D, E. * * 7/6

CESSNA 310
By E. R. Atkins

Colourful American executive twin for small engines. Full detail on this fine plan for easy construction of this 27 in. miniature. Also cabin interior, and colour pattern.

CL/638 2 engines B, C, D * * 6/-



PIPER APACHE
By J. Stivala

A 37 in. span model of the famous American executive transport aircraft, featuring planked wing and fuselage and tricycle U/C. Specially created for the scale enthusiast with smaller engines. Marking and colours for a British registered machine given on plan. Engines 1–1.5 c.c.

CL/756 E, F. * * 6/6

FOKKER FVIIb 3M
By L. Ackroyd

True scale 54 in. version of the famous "Southern Cross" with full internal detail. For single engine in nose and two free wheeling props on nacelles. Detachable wing tips, a scale contest winner.

CL/688 G, H, J * * 7/6

AEROCOMMANDER 680 SUPER
By J. D. McHard

A 53½ in. span model of America's famous high wing twin engined executive transport. Plan gives makings for Pres. Eisenhower's own aircraft. Planked fuselage structure, part sheeted wing. For two 1.5 c.c. to 2.5 c.c. engines, side mounted Tricycle undercarriage.

CL/733 E, F, G * * * 8/6

DORNIER 215
By Capt. C. Milani

Connoisseur's model. Most detailed of all A.P.S. scale plans, and a design that will satisfy the most exacting enthusiast. Cabin internal detail, motor throttle control, colouring data and relatively simple construction, for this all-sheet covered 44 in. twin.

CL/627 2 engines G, H * * * 7/6

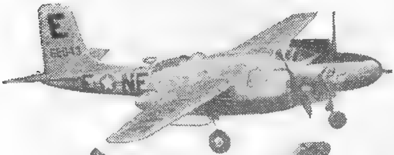
Control Line Scale

HALIFAX VII

By M. Bodey

Well detailed 54 in. (1/24th) scale control-line for 1, 1.5 or 2.5 cc assorted engines.

CL/919 D, E, F, G. * * * 10/-



DOUGLAS A26 INVADER

By D. Deeley

Accurately-detailed scale model of one of the most attractive W.W.II twins, 46 in. span, for two engines Speed 55 m.p.h. with two 1.49 c.c.

CL/520 2 x E, F, G, H. * * 6/-

YAK 4

By K. Taylor

A twin-engine C/L model of the famous Russian attack aircraft. Suitable for 2.4–3.5 c.c. engines. Span 50 in., drawn on two sheets.

MA/346 2 x G, H. * * * 10/-

BEAGLE-MILES 218

By H. J. Towner

Scale twin engined beauty of low wing executive plane for 2.5–5.0 c.c. engine. Detailed cockpit and building instruction sheet, span 60 in. on two 50 in. long sheets.

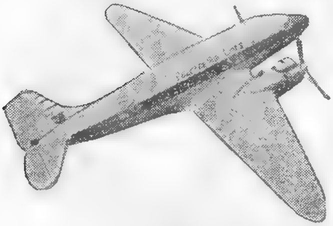
CL/874 G, H, J. * * * * 15/-

DAKOTA MK. III

By J. Last and J. M. Bodey

A true-scale control-line model of the famous workhorse of the air, for a pair of 1.5 c.c. engines designed by two of the most experienced multi-engined model flyers in this country. Plan gives extensive and exclusive colouring and marking detail. Span 47½ in. A very popular "Twin" with A.P.S. followers.

CL/765 2 off F. * * 8/6



FAIRCHILD CORNELL PT.19

By C. P. G. Wheldon

A low wing scale with a handy 29 in. wingspan for 1–1.5 c.c. engines.

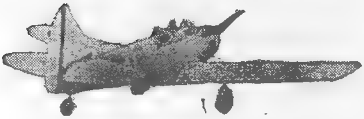
MA/400 E, F. * * 7/6

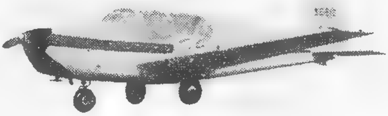
SAAB SAFIR

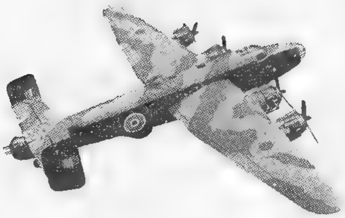
By Hoh Fang Chuin

A 37 in. wingspan C/L scale model of this Swedish light aircraft, for motors of around 2.5cc, featuring all balsa structure.

CL/966 G, H, J. * * 6/-







FAIREY GANNET By J. M. Bodey

A most accurate reproduction of the anti-submarine search aircraft, with drop-off "dolly" undercarriage and all balsa sheet covering. 38 in span and capable of aerobatics with a good 3.5 c.c. diesel, it is also admirable for conversion to the U.S.A. Carrier Deck Landing type of contest.

CL/631 G, H * * 6/6

TIPSY JUNIOR By H. G. Hundleby

An ideal design for scale adaptation, this model has swept the board at many meetings. Available in three sizes to suit your engine.

CL/321 28½ in. D, E (radial) 4/6
CL/322 34 in. G, H (radial) 5/6
CL/323 39½ in. H, J, K, L, M (radial) 6/6
*** ***

CURTISS HAWK P-6E
By D. Deeley

Super-scale-model of the famous American "pursuit ship." Fully aerobatic, or perfect as a concours project. Span 36 in.

CL/539 H, J * * 7/6

FOKKER F.27 FRIENDSHIP
By M. Bodey

An exact one-twenty-fourth scale model in Australian Mac Roberston Miller Airlines colour scheme, suitable for two 1-1.5 c.c. engines. Has sprung nose wheel, 47½ inch span. Flies at 60 m.p.h.

CL/856 D, E, F. * * * 10/-

JUNKERS Ju87 STUKA
By AEROMODELLER Staff

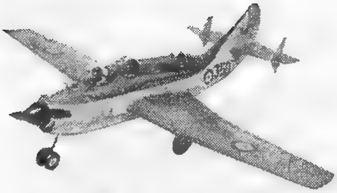
Famous German live bomber in true scale for free flight or controline. An outstanding design of attractive appearance, using .5 c.c. for free-flight and 2.5 c.c. in C/L version; 34 in. wingspan.

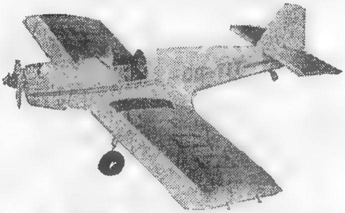
FSP/CL/675 B or G * * 5/-

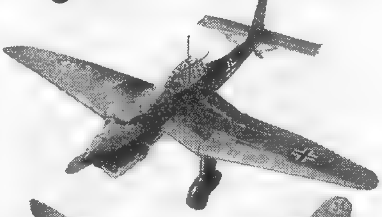
D.H. 88 COMET By J. Last

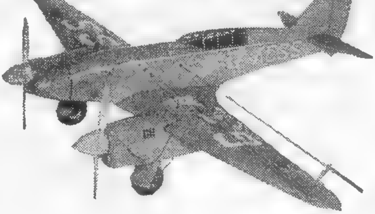
Famous England-Australia air racer to 1/18th scale for two .75-1 c.c. engines. Full insignia and cockpit data on a Super detailed plan for this 29½ in. span controliner.

CL/694 C, D. * 7/6

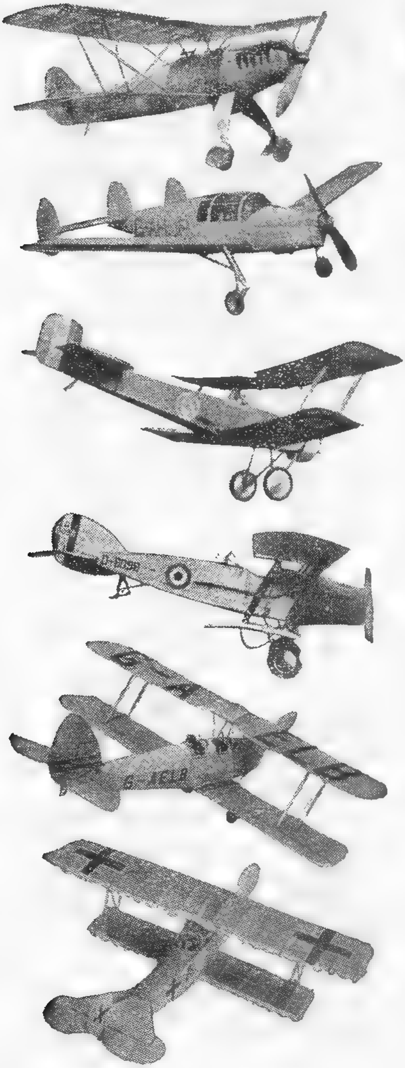


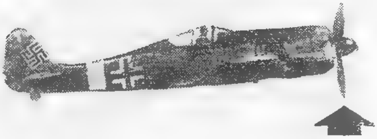






Flying Scale Rubber Powered Models





FOCKE WULF 190

By K. A. Hodgson

One of our most popular scale designs, and with structural modifications capable of being converted to C/L. Span 36 in.

FSR/129 * * 3/6

HEINKEL 51

By G. R. Woollett

Most attractive model of an early W.W.II German fighter. 30 in. Span and extremely elegant.

FSR/141 * * * 5/-

MILES M.48

By H. J. Pridmore

This fine looking low-wing is a good free-flight performer, and is also convertible to control-line. Span 36½ in.

FSR/CL/243 * * 5/-

BRISTOL BULLET

By E. J. Riding

A super detailed flying model by one of Great Britain's foremost authorities. Span 37 in. With 1 c.c. power conversion.

FSR/226 * * 4/6

BRISTOL F2B

By J. L. Roberts

The machine which contributed so much to Allied air supremacy in W.W.I. A fine replica. Span 26½ in. 1/18th scale.

FSR/111 * * 3/6

D. H. TIGER MOTH

By C. R. Moore

Build a model of this famous training machine. The model is capable of high performance, and a picture in flight. Span 44in.

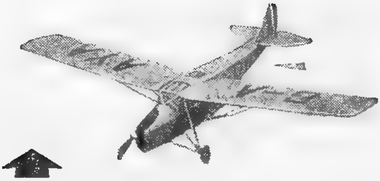
FSR/197 * * 5/-

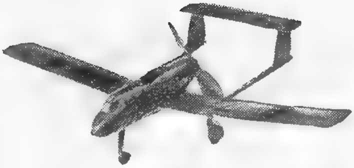
FOKKER D.VII

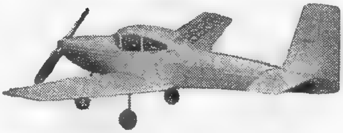
By D. R. Hughes

Fine flying version of the famous World War I machine. Simple construction and easy trimming. Span 21 in.

FSR/297 * * 4/6





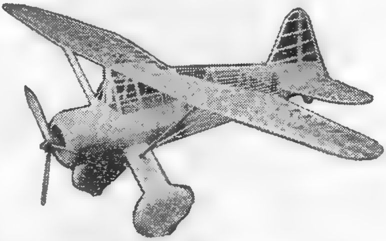


D.H. 80A PUSS MOTH

By J. M. Greenland

An accurate replica with scale area tailplane. Excellent performance. Span 30 in.

FSR/256 * * 2/-

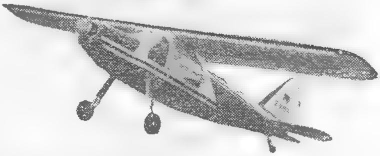


POTEZ 75

By Vic Dubery

All balsa sheet model of the French reconnaissance pusher, 21 in. span and though designed for rudder power, could be modified for a Bambi, Hawk or Kalper Diesel.

FSP/581 * 4/6



N. A. NAVION

By H. J. Pridmore

A fine flying example of a well-known American light plane. Scale 1 inch to 1 foot. Span 33½ in.

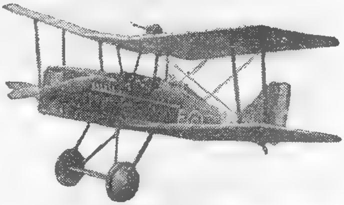
FSR/264 * * * 4/-

WESTLAND LYSANDER

By H. Boys

Many hundreds of this design have been built and successfully flown. The design lends itself admirably to flying scale work. Span 50 in.

FSR/161 * * * * 7/6



DORNIER 27

By D. Garrett

A 27 ins. span rubber powered scale model of a modern German lightplane for the painstaking enthusiast. Plans include modifications to take .3—.75 c.c. engines.

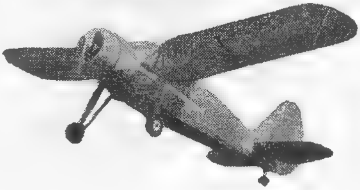
FSR/P/796 **B.** * * 5/-

S. E. 5

By S. L. Spittle

Favourite old-time in flying scale form, this model is a fine performer and very stable. Span 28 in.

FSR/274 * * * 4/6



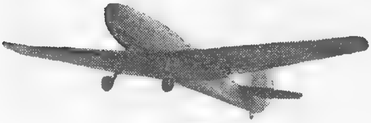
FAIRCHILD ARGUS

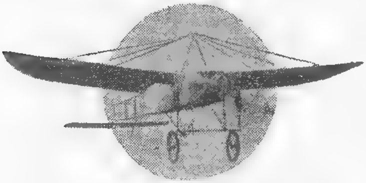
By E. J. Riding

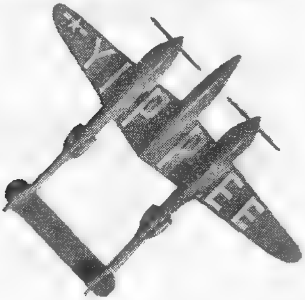
authentic appearance make this a winner. Span 37 in.

FSR/272 * * 4/6

Flying Scale
Rubber







TAYLORCRAFT AUSTER
A sure flyer, with high performance. capabilities. Construction closely follows full-size machine. Span 36 in.
FSR/195 * * 3/6

D. H. MOTH MINOR By G. W. Day
A handy size low-wing model, well suited for the beginner. Span 35 in.
FSR/168 * * 3/6

BLERIOT MONOPLANE
By J. M. Greenland
Military version of exceptional charm and fine performance. Complete with "pilot," and true to scale. Span 44 in.
FSR/275 * * * 6/6

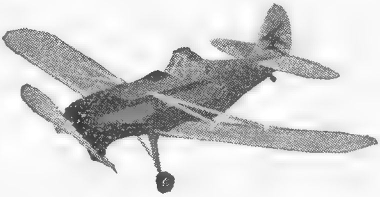
HAVARD II By H. J. Towner
A popular model from the Towner stable —a low-wing trainer. Span 45 in. Can be used as a basis for a control-liine model with sheet covering.
FSR/139 * * * 5/-

WESTLAND WIDGEON III
By E. J. Riding
A first-class flying type with extreme stability. Ideal for the beginner at scale work. Span 36½ in.
FSR/211 * * 3/6

LOCKHEED LIGHTNING
Half-inch to 1 foot version of the famous twin fuselage fighter. Span 26 in.
FSR/158 * * 3/6

Another larger version is also available. Span 42 in.
FSR/159 * * 5/-

PIPER PAWNEE By R. Malmstrom
A 24½ in. span novices basic rubber scale model. Stage by stage construction illustrations.
MA/348 * 3/6



Simple Plan Sets for Beginners

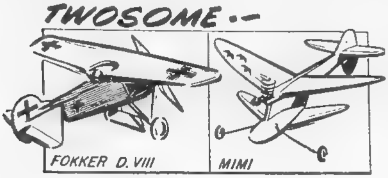
QUARTET **for point-five c.c.**
Includes the delta controliner "Arrowhead" and stunter "Darter" which has coupled flaps and elevators and all the latest control-line features. Straightforward free-flying cabin duration design "Titch" and novel flying wing the "Lil' Plank," make up a perfect quartet to suit any small engine.
U/595 **B, C.** * **2/6**

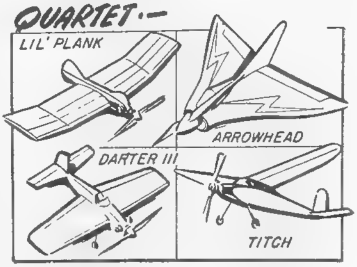
FOURSOME **for 1 c.c. Control-line**
A complete course in control-line for beginners, "Scatterbrain" takes any .8 c.c.-1.5 c.c. engine as a simple trainer, then one can progress to the novel "T-Tray" stunter, or "Gnat" Team Racer for the ½A class or to the scale "Hawker" Tempest for either team race or sport flying.
U/596 **C, D.** * **2/6**

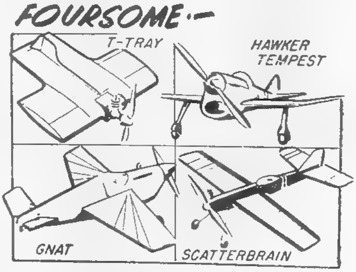
JETEX QUADS
A duration design or the 50 unit, the "Ukkie" is a Dutch design which comes with a profile plan for the Swedish "SAAB J.29" for Atom 35, the French "SIPA Minijet" for a hundred, or the famous "Folland Midge" for either the 50b or 100 units. Four really first-class jetex models, with the SAAB specially advised for the beginner.
U/597 * * **2/6**

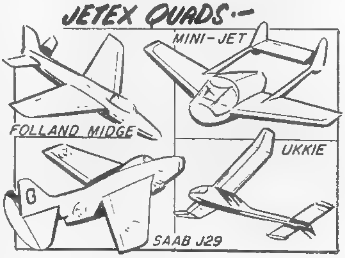
TRIO
Three designs for the popular .15 c.c. Bambi diesel. SE.5a and Tipsy Junior are scale models of famous W.W.I. Fighter and Belgian lightplane designs, Tom Thumb' a specially created sports cabin type model, 22-in. span. These fine models can also be flown by other engines of up to .32 c.c. including the Kalper and American K & B Infant. Thoroughly recommended to all owners of these miniature engines.
U/656 **A only** * * **2/6**

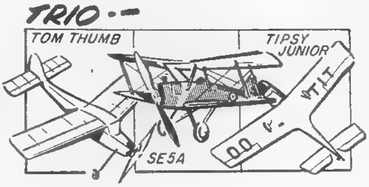
TWOSOME
A pair of free-flight models designed for the E.D. Baby diesel or any engine of up to .5 c.c. Fokker D.VIII is a 22-in. scale version of famous W.W.I. Fighter with unique detachable wings, sheet construction fuselage. Mimi is only 16-in. span, extremely simple to build with fool-proof stage-by-stage constructional illustrations.
U/655 **B, C.** * * **2/6**











Rubber duration

THREESOME
Three attractive rubber-driven models including two scale types of the Piper Pacer and Max Holste MH.152, plus Rigid Midget, a novel racy freelance design. All about 21-in. span, these designs are inexpensive to build and cater for the commercially-produced plastic propellers. Recommended for indoor R.T.P. Speed and Scale Contests.
D/658 * * 2/6

LAST RESORT By J. Baguley
A tried and tested "open" rubber model for sport or contest flying. Span 32 in.
MA/326 * * 5/-

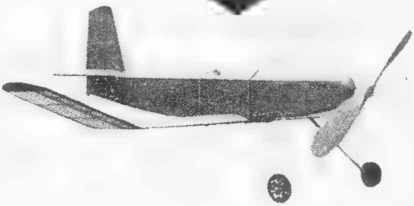
O.HIGH.O By G. Reich and Joe Elgin
Two U.S.A. experts of the renowned Cleveland Model Club designed this **Wakefield** as a high performance model for the novice. Extra plan detail for difficult parts, tough structure, 44 in. span.
D/726 * 5/-

URCHIN By E. Black
A successful culmination of a long line of open class rubber models. Capable of a maximum time **without** thermal aid, and can manage 4½ mins. Span 40 in. Has many contest wins to its credit in the hands of its Scottish designer.
D/751 * * 5/-

XL 56b By Radoslav Cizek
51 in. **Wakefield** of attractive lines and with a great reputation for high performance. Suited to current 40 gramme rules, has been in the Czechoslovakian team many times.
D/690 * * 5/-

GARTER KNIGHT By D. Morley
Introduction to the Popular **'Coupe D'Hiver"** continental rubber driven class and provides a fine starting point as a "first" rubber-powered model. A sound introduction to the contest type model and contest practices. Span 39 ins. with only 10 grams of rubber motor.
D/809 * 3/6

TUTOR By C. West
Beginner's rubber duration model of unusual low wing design. 32 in. wingspan.
D/954 * 3/6



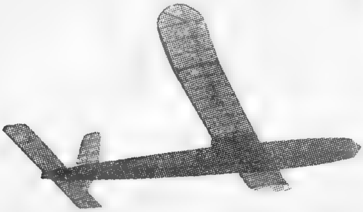
WOOMERA By R. S. Baker
This graceful model won the 1958 World **Wakefield** Championship. Only recommended for more advanced modellers. Span 43 in.
MA/316 * * * **5/-**

TRIP STICK By L. Barr
39 inch span high performance Open Rubber class model for local field flying or major contests. Simple construction make this design quite suitable for the novice, and high performance will reward the effort put into building.
D/818 * * **6/-**

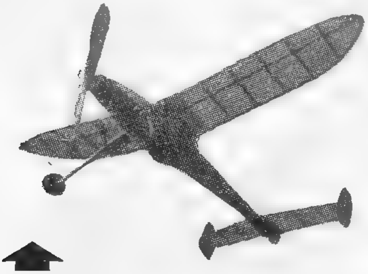
NORTH STAR By R. J. North
A simple construction 52 in. span contest rubber model, ideal for the novice, has nose block details.
MA/338 * **5/6**

UPBURY By G. F. Elsegood
Two models in one, ideal for the novice, will introduce him to both rubber and glider flying. Span 36 in. **two** plans for the price of one. Simple slab sided construction.
MA/392 * **5/6**

KOMAR By S. Zurad
An elementary, stick fuselage type rubber model, featuring some novel construction methods. 26½ in. wingspan.
D/934 * **3/6**



DELINQUENT By J. O'Donnell
British Champion's simple 36 in. "open" rubber duration design.
D/923 * * **5/-**



JEEP By C. A. Shaw
A good general purpose model with consistent performance. Span 28 in.
D/152 * **3/6**

Rubber Powered Models

CLASS B INDOOR MODEL

By R. Parham

A 24 in. span microfilm or condenser tissue covered indoor model with top notch performance, including propeller construction jig.

MA/341 * 3/6

GOLDWINGA

By R. Malmstrom

A novel rubber powered pusher model uses commercial propeller and simple construction. Span 22½ ins.

D/900 * 3/6

PAMYSCAPHE

By A. Landeau

International **Coupe d'Hiver** Contest winner, designed by a leading French flier. Large areas for calm weather flying. Sheet covered fuselage, wing span 43 ins.

D/880 * * 4/6

BARON KNIGHT

By D. White

High performance 39 in. span. **Coupe d'Hiver** contest model with diamond section slab sided fuselage.

D/894 * 3/6

LITTLE MAVIS

By J. Pool

The perfect junior rubber model, slab sided construction, propeller and nose block detail. Flies off the board. Span 28½ ins.

D/890 * 3/6

NIKOLINA

By O. Ehmann

A 33½ in. span. **Coupe d'Hiver,** slab sided fuselage, tapered tip wing. Nose block propeller and instructions on plan. Winner of the 1966 international.

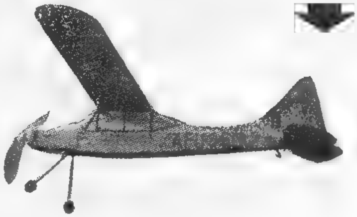
D/873 * * 3/6

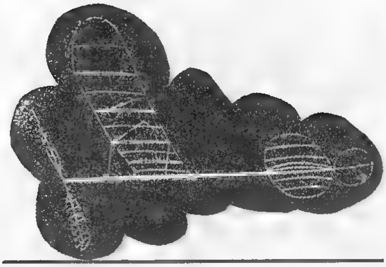
SKYRANGER

By B. Cracknell

Pert little 30 in. rubber model capable of extremely good performance. Simple and inexpensive to build and fly, pleasing appearance, semi-scale.

D/541 * * 4/-





J.B.3 By J. Bessemer

An extremely stable model, well suited for the novice. Large tip dihedral prevents many initial troubles in trimming. Span 36 in.

D/149 * 4/-

ARISTOCRAT By E. Stoffel

High wing, semi-streamlined cabin **Wakefield** size model with exceptional good looks and performance. Span 43¾ in.

D/311 * * * 5/-

PANDORA By L. Roberts

In the British team at the 1959 World Champs, this **Wakefield** is an outstanding design. Features hinged fuselage, the rear section tips up to form a D/T and whole model breaks down into six pieces for easy transport in a box 7 in. x 8 in. x 27 in.—complete with reserve model! Span 50 in. Winner of many rally and gala day events.

D/755 * * 5/-

SURE FLYER By K. Laumer

A 30 in. span rubber driven model with especially simple construction to set the beginner on the way to a successful modelling career. Sure Flyers will teach the basic techniques and provide a great deal of fun.

D/800 * 5/-

TYRA

By Shirley and Bill Horton

A 39 in. wingspan rubber duration model of simple construction. Plan shows both Open and Coupe d'Hiver versions.

D/939 * * 5/-

THE NEW A/M CABIN DURATION By Bill Dean

Revival of one of our most popular little rubber-driven models in a new and up-to-date form. A truly perfect little flyer, and very pretty to watch in flight. Plans contain fully illustrated building instructions 20 in. wing span.

D/494 * 2/6

RED ADMIRAL By R. S. Brewer

(Illustrated on page 47)

Neat 32 in. low-wing design for sport flying with sheet type fuselage sides and easy assembly. A fine flyer for club one model events.

D/718 * * 3/6

Waterplanes

SKIP By D. C. Macvean

A novel gull-wing machine for the smallest engines, "Skip" bears the lines of a pre-war fighter. Simple construction, and very rewarding performance. Both land and waterplane versions given on plan. Span 25¼ in. Engines 0.16 c.c.–0.4 c.c. Original would take a Bambi or a Pee-Wee.

WP/758 A, B. * * **5/-**

AQUARIUS · By W. B. Heginbotham

An angular but attractive design. Robust and well proved by hours of over-water flying. Span 51½ in.

WP/423 E, F, G. * * 5/6

MIRANDA By W. P. Holland

Amphibious model, with a detachable plug-in undercarriage. Large cabin and streamline engine nacelle make this a most attractive design. Wing span 49 in.

WP/605 C, D. * * **4/6**

GULL By K. Kuosma

A very attractive gull-winged 63 in. flying boat, streamlined engine pod and swept back tail plane, give this model a very sleek look. Radio conversion suggestions on the plan.

WP/850 G * * * **10/-**

TOMBOY By Vic Smeed

Most popular beginner's sport model in A.P.S. Simple cabin power model designed especially for the beginner. Either 36 in. or 44 in. span, both on plan. Seaplane version also given.

PET/398 C, D. E * **5/-**

SEAL K. Kuosma

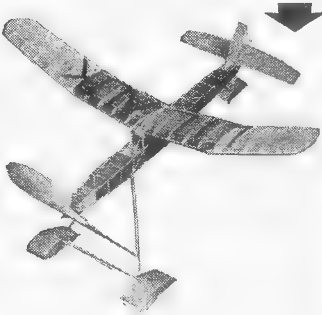
A semi-scale biplane, featuring long hull and removable wings 49¾-inch wing span. Very stable in the air and on the water.

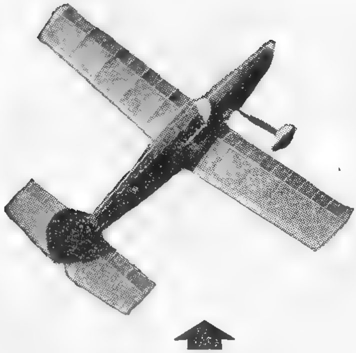
WP/849 G. * * * **10/-**

LITTLE AUK By J. Trinder

30 in. amphibious design can be fitted with floats or normal u/c for excellent contest performance in club events. Free wheeling prop. Sturdy yet simple construction.

WR/685 * **5/-**





RED ADMIRAL
As described on page 45 for rubber powered flying.

Jetex Powered Models

METEOR IV
Twin engined scale model for two "Jetex 100" units—most realistic in flight. Span 21½ in.
J/293 * * * 3/6

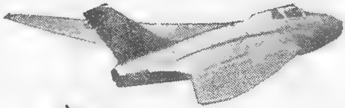
D.H. 108 (SWALLOW)
By D. P. Golding
Scale model for Jetex 100 power by a scale expert. Capable of most realistic performance, it closely resembles this full-size high-speed jet plane in every detail and in the air.
J/479 * * 4/6

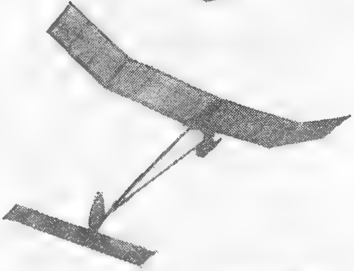
FIZZLEQUICK By I. V. Dowsett
Plan includes full details for two versions, using either Jetex 50 or 100 unit. This outright contest model has terrific rate of climb and has won several contests.
J/399 * 4/-

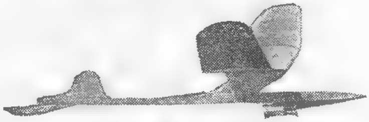
ARROW 100 By Ian Dowsett
Contest winner by well-known "Jetex" designer, with one flight of 18 min. O.O.S. to its credit. Quick to build and easy to trim. Span 24 in.
J/511 * 4/-

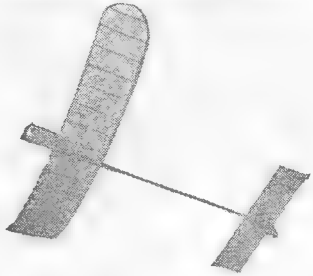
SNOWFLAKE By R. Armstrong
Unique and inexpensive Jetex 50 design for the contest flyer. Prototype did 1:35 from 10 sec. motor run. Ultra lightweight, ultra simple construction. Surprising performance. Span 15⅜ in.
J'772 * 3/6

Jetex Powered Models

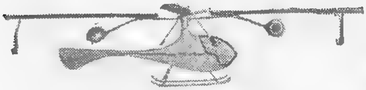


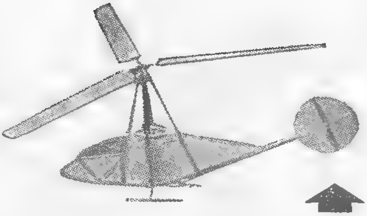






Unorthodox





LITTLE TWISTER By R. Dudley

Simple all strip construction, elastic band powered helicopter for indoor or outdoor fun.

MA/387 * **3/6**

TWIDDLER By E. R. E. Morse

Very successful helicopter powered by two Jetex 50b units, only 15 in. diameter and with very simple sheet construction. Will soar to great height and safely descend under auto-rotation.

J/702 * **2/6**

JUMPING JIMINY By Ron Moulton

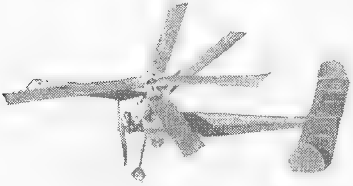
Simple construction, easy to fly, virtually crash-proof. The thrills of autogiro flights are as yet little known; but Jiminy can help to introduce you to this fascinating side of aeromodelling. Maximum rotor size, 30 in. dia.

U/488 C. * * **5/-**

RO-DART By D. Neale

Simple power driven autogiro for small motors. Most amusing and instructive to fly. Quick construction.

U/456 C. * **3/-**



CONTRA-GYRO By Laurie Ellis

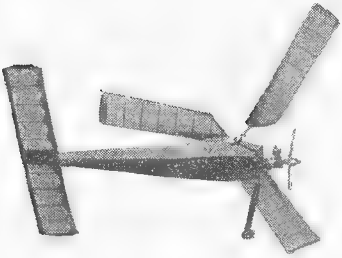
Twin rotor autogiro completely eliminates torque troubles and enables the model to be trimmed for flight direction. Flies well in all weathers, particularly in strong wind.

U/644 C, D. * * **5/-**

SKEETER By D. Cooper and R. Coles

The ideal introduction to autogiro flying. The sixteenth in a line of experiments, success is guaranteed. 32 in. dia. rotor.

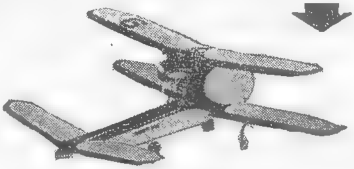
U/532 D, E. * * **4/6**



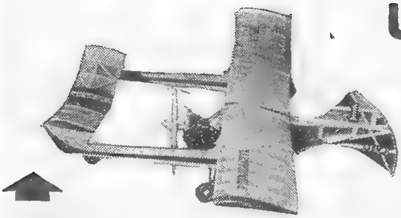
NUMBERNINE By J. D. McHard

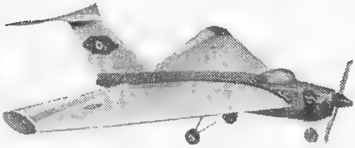
A feast for out-of-rut enthusiasts. This attractive canard biplane gives an outstanding performance with the absolute minimum of trimming troubles. Wingspan 28 in. For 0.75 c.c. engines.

MA/366 C, D. * * **5/-**



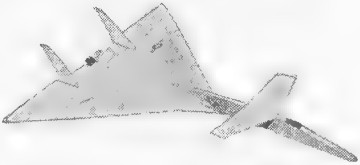
Unorthodox





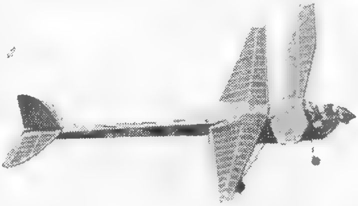
THATAWAY By G. Pegg
Unorthodox 36 in. span tail first free flight sports model with twin booms. Tolerant in adjustment with "very safe" engine position.
U/897 C, D, E * * 6/6

JAVELAN By Laurie Ellis
A 34 in. delta with a tailplane, not unlike the Gloster fighter, with same appearance and flying characteristics. For a new thrill in sport flying, this model is the tops.
U/579 C. * 6/-



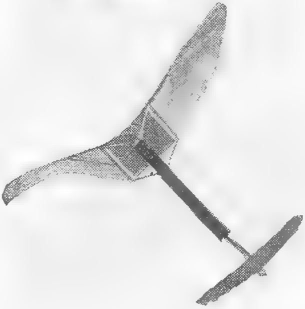
B-70 VALKYRIE By Bob Linn
Ultra modern "low budget" semi-scale delta of 23 in. span for .8 c.c. motors, which will run in a clockwise direction if a pusher propeller is unobtainable. A thriller to fly. All sheet construction, very easy to build.
U/784 C, D. * 4/6

DRAGONETTE By E. F.Bryant
A 40 in. span unorthodox biplane for F/F or single channel R/C, has insect like appearance.
U/885 C, D. * 5/-



SYCAMORE AND HOVERFLY By F. G. Boreham
Three-in-one plans for easily made Helicopters by Britain's leading exponent of the type, also a full-size Helicopter expert. 21 in. diameter for .5 c.c. and 31 in. dia for .75 c.c. plus a scale Bristol Sycamore profile fuselage.
U/713 B, C. * * 4/-

FLAP HAPPY By P. Schoenky
This most unusual model is one of the few really successful ornithopters yet produced. Holder of American records. Span 41 in.
D/333 * * 5/-

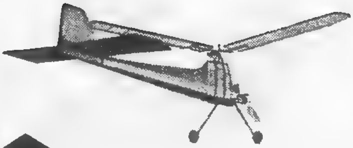


Not Illustrated

FLYING WASHBOARD By Ing. H. Kayser
A 9 in. span (21 ins. long!) slatted airfoil wing model that resembles a flying washboard when viewed in flight.
U/888 C, D. * 3/6

BUZZERCOPTER By K. G. Boreham
A 28 in. span torque reaction helicopter with free wheeling rotor for descent. Elementary construction for a "flying machine" that fascinates.
U/860 C, D. * * 4/-

Unorthodox



MERRY MILLER By Ray Booth
A simply constructed autogiro. Rotor diameter is 32 in. and engines of 0.75–1 c.c. provide suitable power.
MA/212 D, E. * 5/-

DACTYL By C. M. Holden
True flying wing glider without centre pod fuselage, and elevon controlled. Span 60 in.
TG/326 * * 5/-

DELTA I By J. N. Lancaster
A real delta model with all the full-size delta characteristics. Perfectly stable at all speeds and remarkably hard to stall. 35 in. span.
U/490 C, D. * 4/6

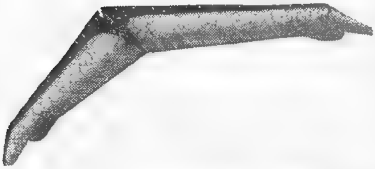
XERNES By L. C. Harris
An all-wing sailplane of futuristic lines with excellent flying characteristics. Span 84 in.
TG/394 * * 5/-

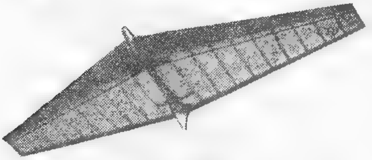
A.V. 10 By Guy Borge
This machine, designed by a French expert, is of especially easy construction, and ideal for the beginner. Span 40 in.
TG/240 * * 4/6

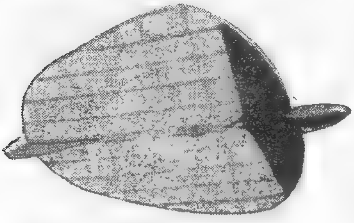
FLOATING KIDNEY
By F. G. Birden
An out-of-the-rut all-wing design resembling the mythical "flying saucer". Span 15¼ in.
TG/251 * * 4/-

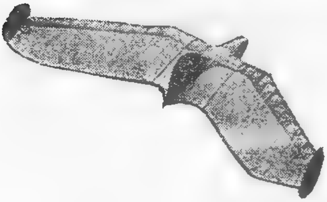
CROWFLY By S. R. Crow
A recognised English expert is responsible for this unique and extremely stable model. Excellent duration ensured. Span 32 in.
TG/241 * * * 4/-

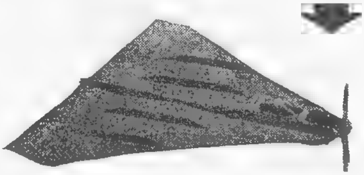
OPUS By P. J. Champion
An exciting 26¼ in. span delta, trike undercarriage sports model, simple and tough construction, with a high flying speed.
U/910 E, F. * 8/6

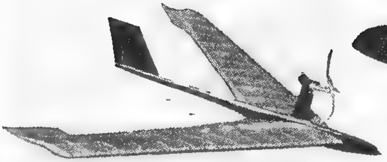








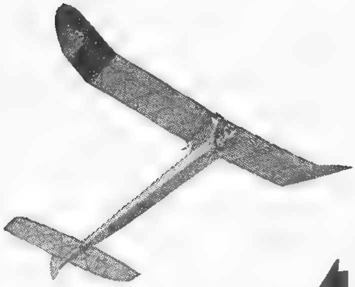




RAKE By L. Ranson
A free-flight tailless sports model. Suitable for 0.5 c.c. engines. **Span 42 in.**
MA/377 B, C. * * 5/-

HOPPITY By W. I. Barrett
A novel C/L autogiro for 2.5cc motors, with semi-scale appearance and very stable to fly. 24 in. diameter rotor.
U/947 C * * 5/-

Contest Power

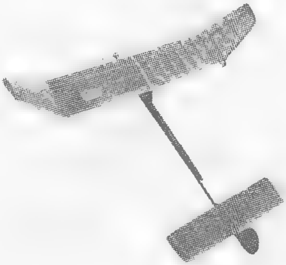


CLIMAX
By P. M. Arnould and D. J. T. Miller
Open power model for a wide variety of engines. Very easy to build and fly. 40½ in. wingspan, this model is an ideal first contest type.
PET/973 E, F, G, H * * 7/6

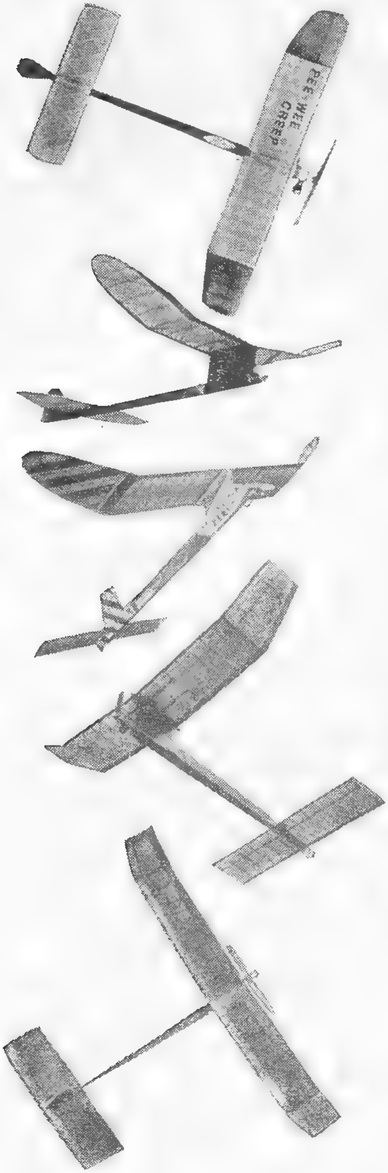
Please ensure that your order is clearly stated and accompanied by the correct remittance and your name and full address in BLOCK LETTERS

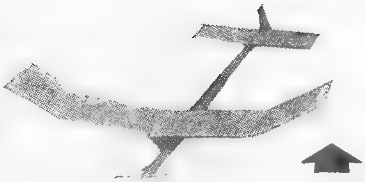
ANGULAR ANGEL By Franz Czerny
An all-sheet H.T.L. beginners' contest power model. Span 35 in. Suitable for 0.5–0.9 c.c. engines.
MA/328 B, C, D. * 3/6

SUNSTREAK By B. Faulkner
An easy-to-build and fly duration model for 0:5–0.9 c.c. engines. Span 36 in. (Aug. 1956).
MA/245 C, D. * 5/-



Contest Power





PATRON By F. Ballardie
A very simple ½A contest power model for .8 c.c. engines. An ideal introduction to contest flying, span 40 ins.
MA/403 C.D. * 6/6

PEE WEE CREEP By Pete Muller
Diminutive 18½ in. span "contest" type model for the U.S. Pee Wee .020 engine. Climbs like a rocket!
PET/732 A, B. * * 5/-

NIG-NOG By Tom Smith
One of Britain's fastest climbing open power models, the 1960 record holder and winner of Shelley, Hamley and Frog Senior Trophies. 66 in. span polyhedral wing. For the experienced power flier only. 3.5–5 c.c.
PET/781 H, J. * * * 8/6

PULTERI By O. Niemi
F.A.I. Power design from Finland. Simple to build and easy to trim. Flat bottomed wing section for fast climbing. Many contest successes in Finland and the Nordic Countries, including 2nd Nordic Countries Championships, 1960. Span 60 in., for 2.5 c.c. engines in F.A.I., or 3.5 c.c. if flown in open contests.
PET/764 G. * * 7/6

ELIMINATOR By B. Wheeler
One-time World Championships winner. Side-mounted motor and 52% tail-plane. Wings may be made in two halves, when model will pack in 8 x 8 x 33 inches box. Span 45⅛ in.
PET/510 E, F. * * 5/-

CELERITAS By T. Strassberger
29 in. span, this model is designed by a top Yugoslavian modeller. Suitable for a beginner's first contest machine.
PET/527 C. * 5/-

MINICANO By F. Lloyd
Australian 1/2A power with basic construction, suitable for a novice introduction to power contest flying. 49 in. span.
PET/882 **C, D.** * 5/-

CREEP By B. Eggleston
High performance contest winning design for F.A.I. or open events, especially suitable for vertical take-off. Wing span 50 in.
PET/609 **G.** * * 6/-

DYNAMO By A. Young
Contest winning ½A free flight model of 45 inches wingspan and simple as can be for ease of construction and flying. Suits all .8 c.c. (.049 cu. in.) motors. Placings in a whole string of contests, prove this to be a tip-top competition design.
PET/812 **C, D.** * * 5/-

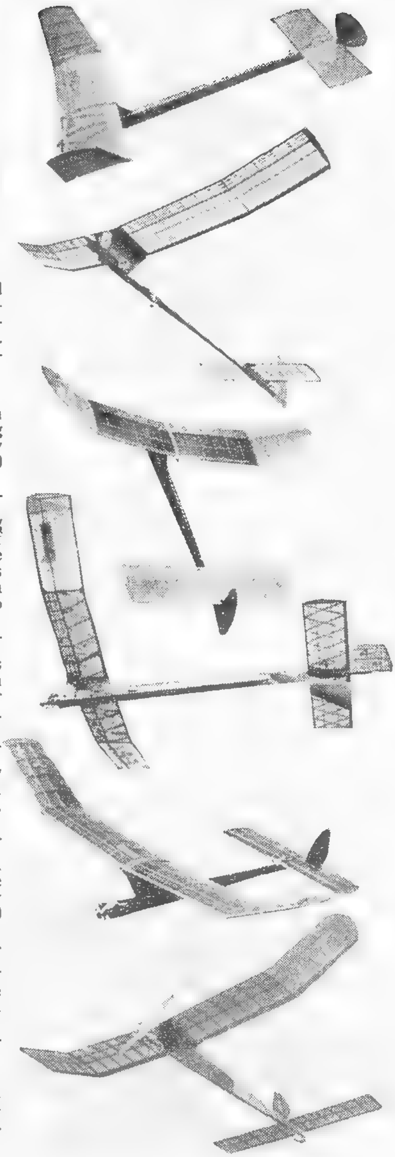
Y—BAR By A. J. Brooks
Profile fuselage contest winning pylon design with large tailplane and rear mounted fin, for F.A.I. or Open events. Span 40 in.
PET/590 **E, F.** * 5/-

VINDALOO By M. Dilly
A really hot ½A contest power model with a rocket like climb, 45 inch span, excellent contest record.
PET/854 **C, D.** * * 5/-

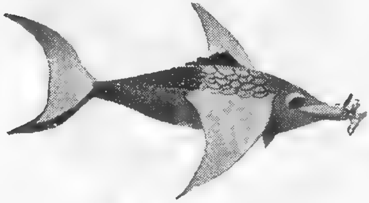
ZEUS By K. Coman
Contest winning ½A power model, simple structure, and a terrific climb, very easy to trim, an ideal first power model. 40 inch span.
PET/841 **C, D.** * * 6/-

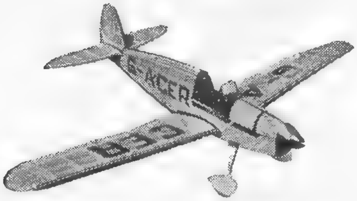
STOMPER By George Fuller
Slab-sided contest power model with prize-winning performance. Very easy and inexpensive to build. Span 48 in.
PET/499 **E, F (Beam)** * 5/-

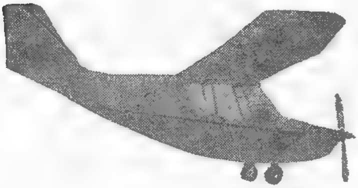
FAITAL By S. Savini
A 62 in. span International contest winning, elliptical tipped F.A.I. power model. Engine mounted in cast alloy pan.
PET/881 **G.** * * * 8/-

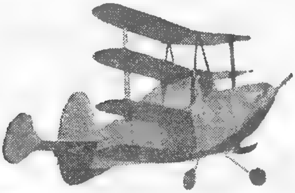


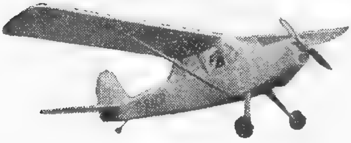
Sport Power











FISHFACE By E. Clutton
Scale to the last gill, this 20-inch span novelty is made for Sunday sports flying.
U/851 B. * 3/6

PINKY By C. Read
Unusually smart little low wing sports free flighter of 35½ inches wing span .5–.8 c.c. powered. Completely stable in flight and offers to any modeller a great deal of enjoyment.
PET/813 C. * * 5/-

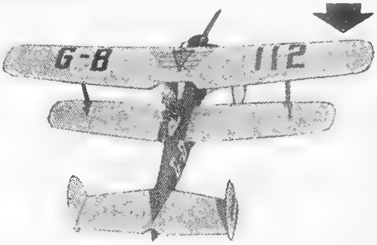
CYRANO By K. Laumer
The pert little cabin design for small motors is perfect for small field flying. High tail deep cabin and distinctive nose give the machine an exclusive air. Very easy to build. Span 29¾ in. Engines .5–.8 c.c.
PET/760 B, C * 5/-

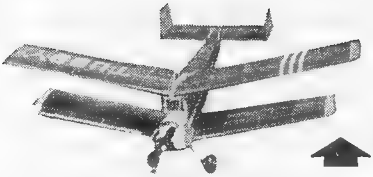
TERRIER By Brian Lewis
Quick building, strength and attractive lines ensure popularity for this 33 in. span design. Excellent for the newcomer to power flying.
PET/553 B or C * 5/-

KWOD By E. Clutton
Novelty is the key to this quadraplane design, though not without purpose, for it can be flown within the boundaries of a small field. Span 20 ins. for .5–.8 c.c. engines.
PET/787 C. * 5/-

SKYTALE By R. A. Chivrall
Large near-scale model for sport or radio control conversion. Voluminous cabin permits use of bulky R/C equipment and well spaced structure makes it an easy model to build. Two plan sheets give full detail for this 78 in. beauty.
PET/636 G, H, J. * * * 12/6

WHIPPET By J. Wylie
A really smart little biplane for round-the-pole or fair weather flying. Makes the most of the current range of small motors. Span 17½ in. Suitable for engines of .15-.32 c.c.
MA/309 B, C. * 3/6





TUBBY By C. Read

An easy-to-build tough 20-in. span, "small field" sport biplane specially designed for the Cox .010 engine. Span 20 in.

MA/358 A, B. * 3/6

SARACEN By P. J. Angus

A popular and easy to build pusher type model, any resemblance to a very efficient Navy jet fighter is purely coincidental. 20½-inch wing span. All sheet balsa construction.

PET/830 C. * 4/6

CHERUB By Vic Smeed

An aptly named "baby". All sheet fuselage and simple wing construction make it an ideal model for any beginner. Span 30 in

PET/485 B, C. * 5/-

VAMPIE By Lt.-Cmdr. T. E. Naughten

All sheet balsa and practically unbreakable. Pusher engine saves props. one-piece construction, is incredibly strong. 36 in. span, a fast and thrilling flyer.

PET/619 C, D. * 5/-

BI-PLAY By W. P. Holland

Sport Biplane with a sleek cabin, four separate wing halves, easy construction and for a wide power range. Sheet fuselage and torsion bar undercarriage. Span 45 in.

PET/582 C, D, E. * * 4/6

SHARP SCOOTER By K. Laumer

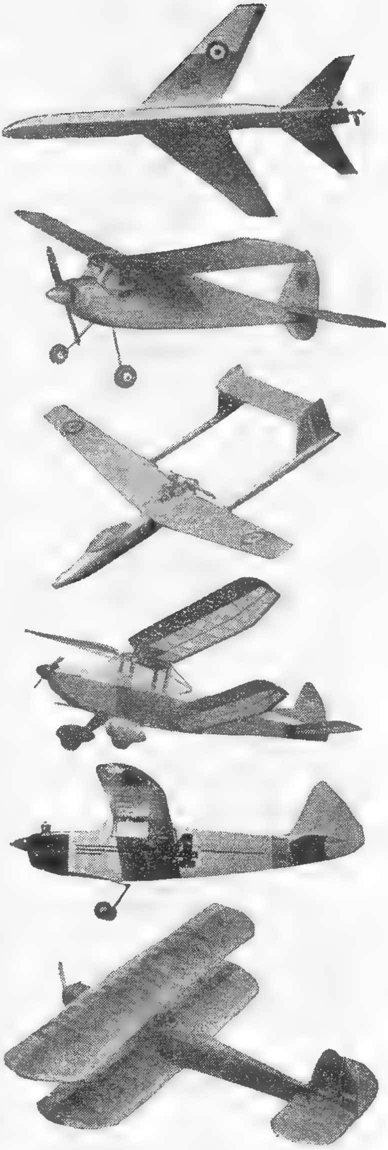
A slick 29 inch span sport free flighter for .5 to .8 c.c. engines, the Sharp Scooter has eye appeal from every angle. Simplest possible structure enables the modeller to put this model in the air with a minimum of delay.

PET/804 B, C. * 5/-

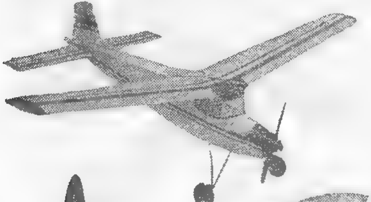
DOOHICKY By John Swift

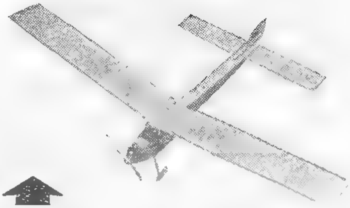
Diminutive biplane, with a sparkling performance. Only 25 in. span, it can be dismantled and carried about in a small case.

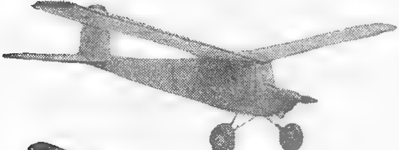
PET/565 B or C. * * 5/-

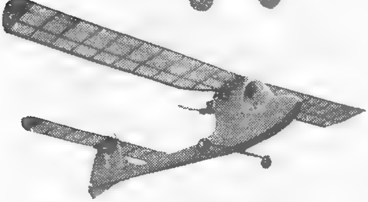


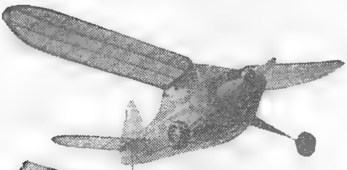
Sport Power Models

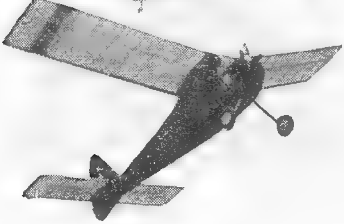












MANDY By Mike Green

The novices ideal first power model. Elementary construction combined with sleek lines add up to a perfect local park flying model. Wingspan 45 ins. Engines 1-1.5 c.c.

PET/861 D, E. * 4/6

SNOW WHITE By M. Bridge

Attractive 40 in. Sport flyer suitable for beginners. All-sheet fuselage and simple tapered wing construction with constant thickness ribs.

PET/585 C, D or E. * 5/-

ETHEREAL LADY By Vic Smeed

Cabin contest power model, elliptical fuselage, parallel chord wings with elliptical tips. Scale appearance. Span 48 in.

PET/291 E, F. * * 5/-

FRANKENSTIEN
By M. W. Thompson

Easily constructed slabsider power model, designed for precision flying. Span 50 in.

PET/346 D, E. * * 5/-

PUSHY-CAT By Vic Smeed

Neat little pusher model, of straightforward construction with all-sheet fuselage. Winner of 1953 Bowden Trophy. Stable flight, excellent take-offs and landings. 44 in. span.

PET/528 C, D. * * 6/-

POPSIE By Vic Smeed

Rugged sports model, 38½ in. span, capable of accommodating lightweight radio-control and absorbing a tremendous amount of punishment.

PET/460 C, D, E. * * 6/-

TOMBOY By Vic Smeed

Most popular beginner's sport model in A.P.S. Simple cabin power model designed especially for the beginner. Either 36 in. or 44 in. span, both on plan. Seaplane version also given.

PET/398 C, D, E, * 5/-

BLACK MAGIC

By F. Hempsall

Elegance of appearance and performance make this one of the most popular power models in our range. Span 60 in.

PET/268 F,G,H. * * 5/6

MERCURY IV

By Mick Smith

A Concours d'Elegance winner with excellent flying characteristics. Two huge plans measuring 132 in. x 38½ in. and special instructions for this 8-foot beauty. An ideal subject for the connoisseur and "big stuff" radio-control enthusiasts.

PET/504 J, K, L, M. * * * 12/6

ROARING 20

By B. A. Striegler

Nifty sport biplane of very attractive and practical lines and high degree of stability. 28½ in. wingspan, sheet fuselage sides, easy-to-build and a sure flyer.

PET/ 695 B, C. * * 5/-

ENVOY

By C. A. Shaw

Cabin tricycle model of pretty appearance and good performance. Extremely safe to fly. Span 40 in.

PET/461 C, D. * * 4/-

VENTURE

By M. Campbell

Semi-scale, open cockpit biplane for inverted motors. Span 42 in. Great for precision flying.

PET/391 E, F, G. * * 5/6

COURIER

By J. B. Cracknell

Novel fuselage cross-section with turbo-jet lines and trike u/c make this an advanced design, yet easy to construct on basic fuselage crutch; 42 in. span with all sheet tail surfaces

PET/662 B, C, D. * * 5/-

CHLOE

By R. Darr

Struts give a semi-scale appearance to this easy-to-build streamlined 36 in. sports model. Specially created to pack away into a small space.

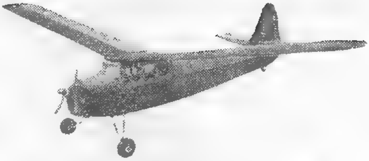
PET/678 B, C. * * 5/-

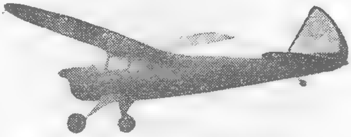
GULLIE

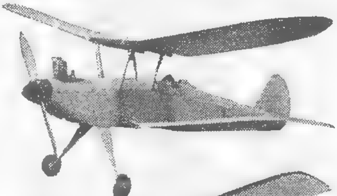
By Colin Read

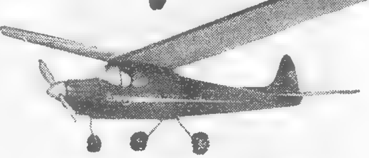
An interesting and unusual semi-scale sports model with "gull" wings. Suitable for 1-1.5 c.c. motors. Span 50 in.

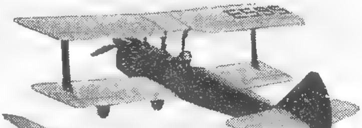
MA/375 D, E, F. * * 5/-

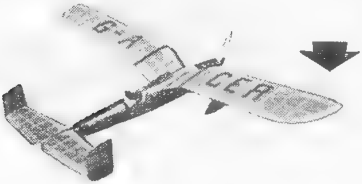


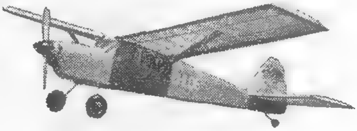




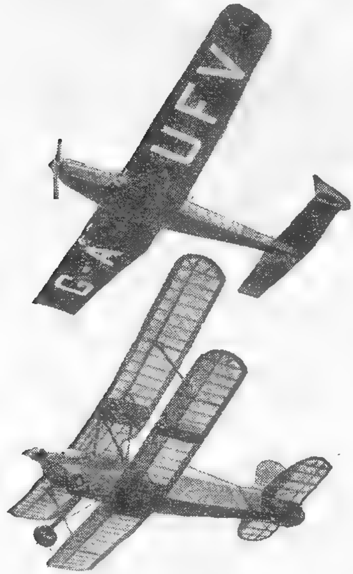


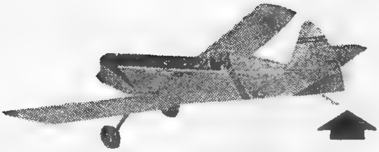






Sport Power





WEE SNIFTER By J. D. McHard

A snappy free-flight sportster which the novice will find easy to build and fly. An all-time best. Span 30 in. Suitable for 0.5-0.8 c.c. engines.

MA/340 B.C. * 5/-

MUDHOPPER By J. C. Trinder

Low-wing sport design for .75 c.c.–1 c.c. engines and having a near-scale appearance. Gets its name for ability to withstand rough landings on bad terrain. 48 in. wingspan, two-piece wings, open cockpit or bubble hood.

PET/705 C, D. * * 5/-

BROOK'S BIPLANE By B. Brooks

No bipe was ever more famous than this one the prototypes of which have flown for hundreds of airborne hours. Amazingly stable and realistic, ideal for radio conversion, span 66 in.

PET/492 G, H. * * 8/6

ANITA By Brian Peckham

An attractive 29-in. span free-flight biplane suitable for 0.5–0.9 c.c. engines.

MA/320 B, C, D. * 5/-

MAM'SELLE By Vic Smeed

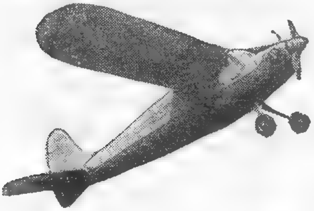
Most attractive cabin sport plane with elliptical section fuselage and neat nose cowling. A fine flyer in all conditions. Wing span 37½ in.

PET/612 B, C, D. * * 5/-

WINDBAG By C. Read

Airship type sports model, span 9 in. length 31 in., simple construction for .75 c.c. tractor engine on nose.

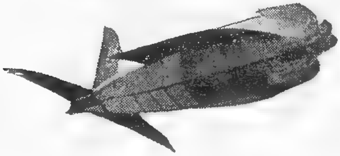
MA/386 C, D. * 3/6

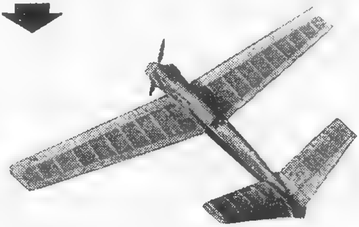


SCAMP By A. Longstaffe

A semi-scale low wing model of 41 in. span with a pendulum controlled vee-tail. For 1 c.c. motors.

MA/173 E. * * 5/6





MADCAP By Vic Smeed
Beginner's power model with alternative fuselages, profile contest or cabin sports. Very tough and virtually fool and crash-proof. Span 45½ in.
PET/470 D, E. * 5/-

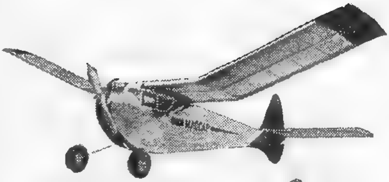
DEBUTANTE By Vic Smeed
As the name implies, a pretty model with high performance and unblemished character. Specially printed plans include full photo detail and instructions for this 40 in. cabin sports job.
PET/493 C, D, E. * 4/-

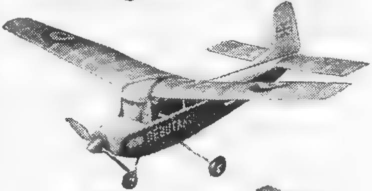
COCCINELLE By H. E. Males
Interesting machine for those keen on unusual multi-engined F/F models. Has two rear mounted engines after the style of modern jet airliners. Simple construction. Span 48½ in. for two engines .5–.8 c.c., will fly equally well on one engine after the other has failed, remarkably stable in windiest conditions.
U/752 B, C. * * 6/6

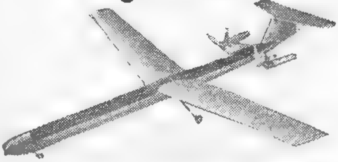
JAVAHAWK By P. E. Norman
Unique ducted fan design by Britain's recognised expert in this field. Ply formed fuselage gives very strong yet light structure. Full details for building model and fan are given on plan. This model climbs fast! For 1.5 c.c. engines. Span 27½ in.
U/740 E, F. * * * 7/6

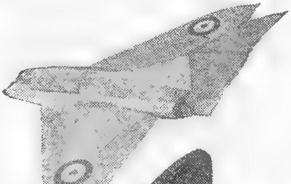
WREN By G. R. Woollett
A sturdy cabin power model employing semi-elliptical wing and tail surfaces. Attractive appearance, 42 in. span.
PET/308 C, D. * * 5/-

PEPE By A. Healey
Want an easy to build model for that spare .3 to .8 c.c. engine ? Here is one that the least experienced modeller can build without difficulty, 36-inch wing span, has novel fuselage shape.
PET/835 B, C. * 4/-

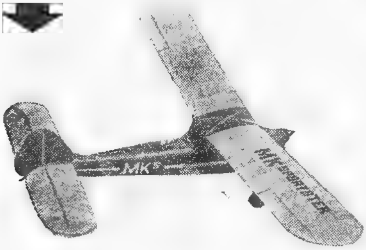


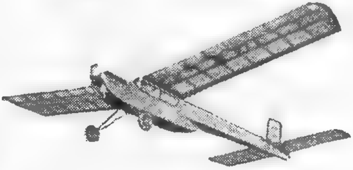






M.K. SPORTSTER
By Hoh Fang-Chiun
A model for 0.5–1 c.c. engines, which is a very stable flyer.
MA/239 B, C, D. * 5/-





Sport Power

POPPET By C. Read
A neat little easy-to-build sportster of rugged construction. Suitable for 0.5–0.75 c.c. engines. Span 37 in.
MA/334 C, D. * 3/6

GIGI By J. Barker
Novice's first power model, sheeted fuselage 39 in. span for 0.8–1.0 c.c. engines. Designed in conjunction with "Let's Go Flying" series.
PET/872 C, D. * 3/6

BLITZ By B. Osborne
A semi scale all sheet B.A.C. Lightning powered by a .8 c.c. tractor engine that's hard to see in flight.
PET/871 C, D. * 3/6

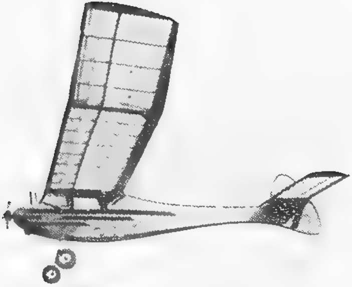
POPS By C. Read
37in. Cabin Sportster for .5-8 cc with twin fins.
PET/918 * * 3/6

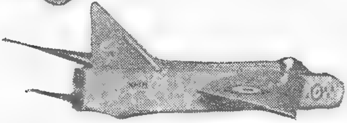
HORIZON By R. Malmstrom
26 in. Shoulder wing .010 simple free flight power for small field flying.
PET/913 B * 3/6

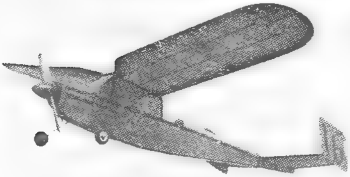
PERIL By S. Pearson
Fast flying tough sportster for .5-.8 cc, 24in. span.
PET/921 B, C * * 3/6

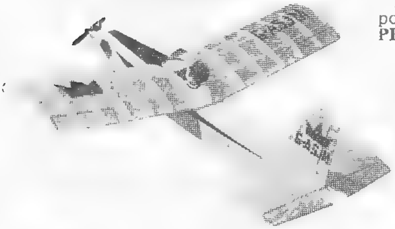
MAYFLOWER By A. Healey
38 in. Cabin sports for .75 cc.
PET/928 B, C. * 5/-

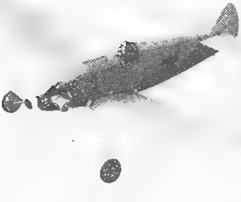
CICADA By Hoh Fang-chuin
Lightweight free flight sports for .010 power, 28½ in. span.
PET/927 B. * 3/6

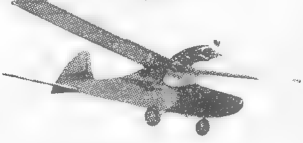








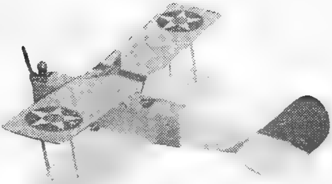


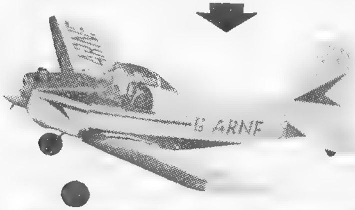


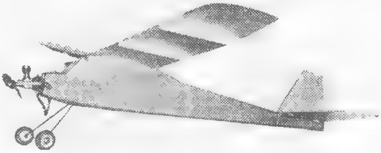
MINI CLOWN By T. Stothers
Sports F/F biplane for small radial mounted engines. Features realistic lines from simple all sheet construction.
PET/974 B, C * 3/6

HUMBUG By A. W. Bennie
A 30 in. wingspan all sheet, cabin type, sports power model.
PET/959 B * 3/6

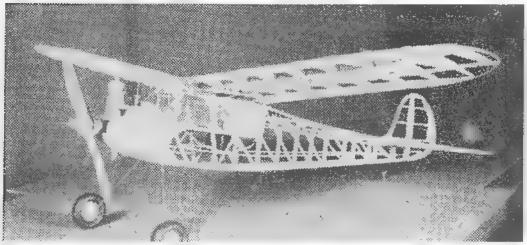
MOSS TROOPER
A 35 in. wingspan semi-scale sport power model featuring low wing and large cabin.
PET/962 C * 6/-







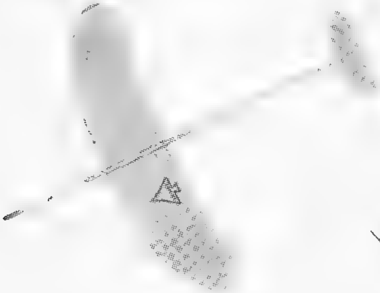
A super plan for a beautiful vintage 1939 design from the U.S.A.



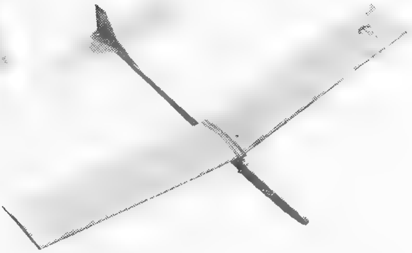
AIR TRAILS SPORTSTER
By B. E. Shereshaw

A true vintage sports model of the pre WW2 era, the plan gives details for installing spark ignition engines; although modern engines can of course be used. 40 in. wingspan.
PET/961 G * * 10/-

Gliders

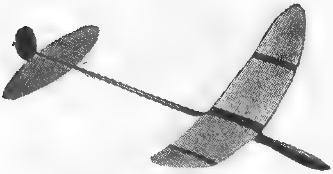


SLARMI By T. Slater
Contest winning chuck glider of 18 in. wingspan. Can be flown in most conditions and capable of averaging 45-50 seconds.
G/953 * * 2/6



MICKEY By J. Van Hattum
Simple glider of all balsa construction which is ideal for raw beginners. Small size, 23½ in. wingspan, keeps the model robust and safe to trim and fly.
G/969 * 3/6

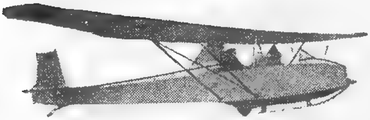
Gliders



ARNHEM By T. Hervey

Designed for the younger modeller, with all-sheet sides and simple construction, yet with realistic appearance. Span 30 in.

G/263 * **3/-**



YELLOW BIRD 13 & 20
By A. Webber

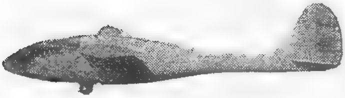
For Maximum enjoyment from a minimum outlay, the humble Chuck-Glider cannot be beaten. A really high performance example in 13 in. and 20 in. versions, the plan includes full building information, trimming and launching technique.

G/805 * **3/6**

WACO HADRIAN By O. J. Lee

A fine flying scale model of the famous troop-carrying glider, and with a superb performance. Span 50 in.

FSG/219 * * **3/6**



SLINGSBY TANDEM TUTOR (T.31) By J. Wilson

A 54 in. scale model of a popular training glider used in many clubs and by the R.A.F. for A.T.C. Cadets. Has good flying qualities although true scale.

FSG/692 * * **5/-**

BREGUET 901 By A. Millon

Elegant French high performance sailplane with very high aspect ratio 67½-in. wing capable of surprising performance. Planked fuselage.

FSG/680 * * **3/6**

IGO By G. W. W. Harris

An ideal machine for contest flying, the original made one flight of over 80 miles. Span 60 in.

G/222 * * **5/-**

SILENT KNIGHT By D. R. Hughes

Single channel or multi-slope soarer with simple and rugged construction, an ideal first soarer. Span 85 ins.

MA/398 * * **10/6**

Open Gliders

LULU MK.II By J. Barker
A high-performance sailplane of extremely simple construction, and an ideal beginner's model. Span 50 in.
G/338 * 5/-

FUGITIVE MK.I By D. C. Butler
Lightweight sailplane, one-time winner of the Pilcher Cup. Easy construction with all-sheet fuselage and semi-pylon wing. 50 in. span.
G/258 * * 5/-

CRACOW By L. G. Temple
A super contest type model from the Temple stable. Sturdy yet light construction makes this ideal for contest work. Span 72 in.
G/119 * * * 6/-

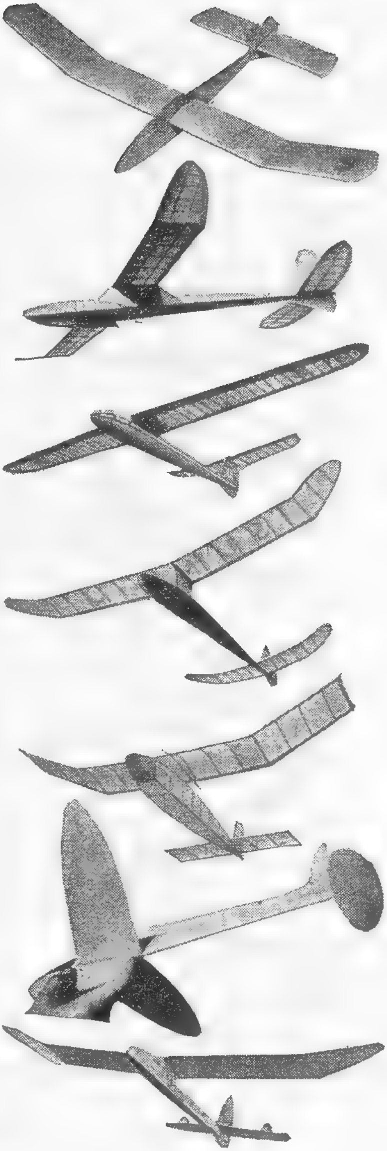
MICK FARTHING GLIDER
A lightweight glider by an acknowledged expert in this class. Span 40 in.
G/228 * * 3/-

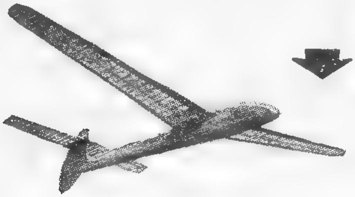
WALTHEW GLIDER By R. Scott
A novice's first glider, this model has simple yet strong construction. Span 29 in.
G/341 * 3/6

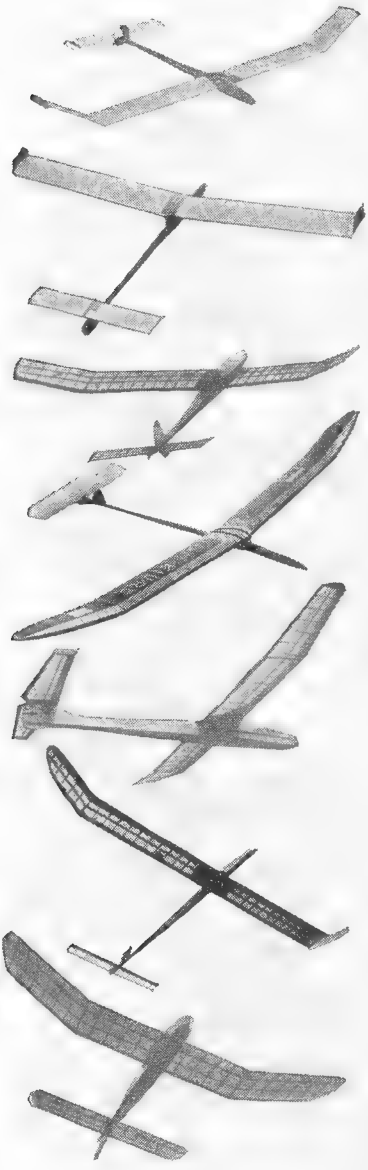
SAILAWAY By Vern Clements
A 15 in. chuck glider in profile or pod and boom form and a little glider for indoor work, only 6 in. span. An ideal plan to introduce the novice to this type of flying.
G/730 * 2/6

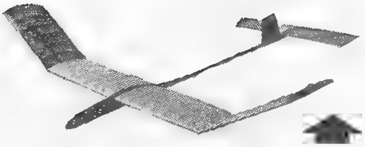
ARCHANGEL By L. Gabriels
A ruggedly-designed sailplane, ready to stand up to hard knocks in rough weather flying. High performance. Span 72 in.
G/368 * * 5/6

MOBY DICK By E. Smith
Shoulder wing high-performance contest sailplane, utilising laminar flow wing section. Span 82½ in.
G/310 * * * 10/-









DOWNBEAT By J. Barker

An easy to construct A/1 specification glider designed to ensure fool proof construction, 44 in. span.

G/867 * 3/6

TOPSCORE By J. B. Hannay

British leading A/2 design, proven over many years. A contest winner with construction simple enough for beginners. Unusual tip fins on 73-in. wing with tongue and box attachment. Placed 8th in 1957 World Championships.

G/684 * * 5/-

G.B.IX By G. Brewin

Leading British A/2 design in 1957 U.K. Team Trials has sheet diamond fuselage, drooped T.E. section and tip fins for shallow dihedral on 66-in. two-piece wing.

G/676 * 5/-

QUICKIE By R. Monks

One of the most popular and successful A/2 sailplanes ever; simple construction, has won innumerable contests. Span 66½ in.

G/517 * 6/-

SANS EGAL By R. Hyvarinen

Nordic countries Championship winner, a super job in all respects with admirable all-weather performance. 80 in. wingspan with detachable halves, hardwood wisely used for spars and longerons.

G/725 * * * 7/6

NORDIC TERN By R. F. L. Gosling

An A/2 design by an expert at model sailplanes. Features automatic ailerons and a wealth of practical ideas developed during the designer's long experience. Span 66 in.

G/374 * * 5/6

SATAN By W. Pullen

Longer tail moment version of the famous Altair with other features from Lucifer, by another South Essex clubman. Simple to build and with two-piece wings measuring 76 in. span, it boasts high performance for little constructional effort.

G/717 * 5/-

CORSAIR By R. Holt

Very simple beginners A/2 model with top class performance. Winner of Thurston Trophy and many high placing in other national competitions. Span 48 in.

G/516 * 6/-

PATCHES By G. Kinney

Leading U.S.A. A/2 glider of 72 inches span, with emphasis on rigidity, strength and flight stability. Complicated though warp free structure, is not one for beginners. Original made seven consecutive maximums under contest conditions.

G/817 * * * 7/-

SHORTY By J. Hancock

Ultra short nose A/2 for thermal snifting. Successes include several wins at big rallies; easy construction allows for breaking down to small parts for transport. 65 in. span.

G/583 * * 4/6

FLORIDIAN By B. Bell

A very simple but highly efficient A/2 glider, among its long string of wins is a 1st place at the 1962 U.S. Nationals. 66 inch span. Two-piece wings.

G/847 * * 6/-

AQUILA By H. Thomann

Europe's most advanced A/2 design in 1958 by Swiss expert aerodynamicist; 80-in. span, rolled sheet fuselage boom, asymmetric weight balanced, turbulated wing. Very high performance.

G/681 * * * 7/6

CORIOLIS By K. Coman

This is a simple to build 45½ inch span A/1 glider, with a real contest pedigree, including two first places at the R.A.F. championships.

G/855 * * 5/-

MIGRATOR AND THERMALNOSE By E. Avory

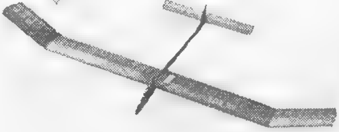
A 74-inch span A/2 glider from Canada. Two versions on the same plan, both very easy to build. Thermalnose came second at the 1963 World Championships, losing the contest by a mere nine seconds and is a direct development of Migrator.

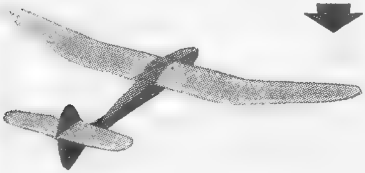
G/826 * * 7/-

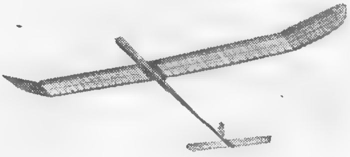
SUNCLIPPER By A. J. Smith

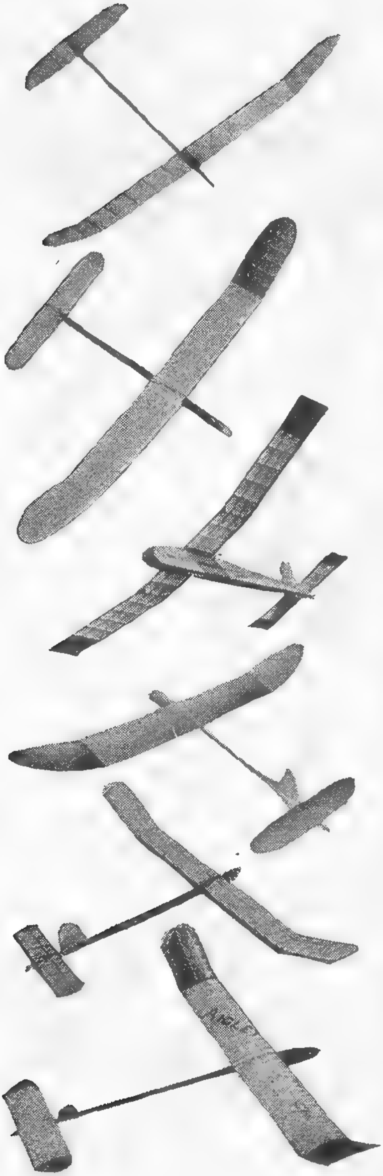
Theory into practice. A simple high-performance design by the author of "Simple Aerodynamics". Span 60 in.

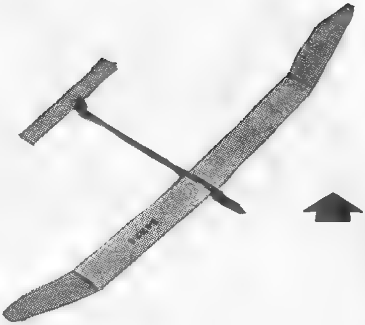
G/192 * * 6/-











SYNCOPATOR By P. Newell
A/1 Specification glider with elliptical wings and goedetic structure. A regular contest winner, span 55 ins.
G/896 * 3/6

MINI-EGAL By R. Hyvarinen
A 55 inch span A/1 glider from Finland featuring Jedelsky aerofoil all-sheet balsa wing for rugged "all weather" performance (capable of a 2 minute average) and the advantage of no tissue covering.
G/822 * 5/-

LA MOUETTE By R. Cizek
Czech expert, Rad Cizek is renowned for his clever, high performance, contest models and this one is no exception. The A/1 class, which it meets admirably (Span 47 in.) is likely to become widely adopted. Already include in U.S.A. and European contests programmes, it will be a perfect event for La Mouette.
G/774 * * 3/-

GOLDEN WINGS By Vic Smeed
Simple 44½ in. design to A/1 specification. Already very popular for Club "one model contests" this design is a certain success.
G/594 * 2/6

SIESTA By P. Gasson
To A/1 specification, this novel 48 in. span glider has all-sheet construction and can be built ready to fly in an afternoon! Elegant lines and good performance.
G/696 * 3/6

FLYING ENTERPRISE
By C. Campbell
A/1 class glider of 52½ in. span by a Scottish enthusiast. Simple structure, with even chord "W" brace wing rib pattern wing. Makes an ideal "second" glider in one's aero-modelling career.
G/786 * 4/-

AIGLET By Martin Bridge
Refined high performance model to the popular class of small glider. Plan includes photo of finished model and complete instructions. Span 45½ in. U.S. Nationals winner and holder of several duration records.
G/643 * 3/6

CUE-DOT By M. Dilly

A/1 specification glider, rolled sheet fuselage and sheet top wing surface. Span 51 ins. Has very short nose.

G/909 * * * 3/6

AURIKEL By H. Hansen

An A2 World Championship Winner with simple construction and high performance from Denmark. Span 65 in.

MA/171 * 7/6

MEANDERER By J. Baguley

96-in. span, large lightweight, can meet F.A.I. rules, has fine contest record, very simple construction, two-piece wing. Averages 2 : 50 from 164-ft. line.

G/683 * * 7/6

WISHBONE By Al. Wisher

A 78 in. span high performance A/2 glider with a long string of National Contest wins. Simple to construct the part sheet covered wings are mounted on a low pylon. Renowned for its thermal-holding capability.

G/859 * * 8/-

ROLLING STONE By D. White

A top notch A/2 contest design with a tremendous contest record, multi spar wing spans 76 ins. and is pylon mounted.

G/876 * * 6/-

STROLLING BONE

By D. H. White

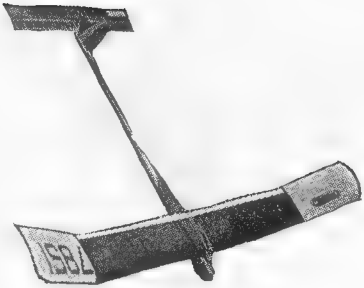
A simple A/1 glider with two piece wings of 50 in. span, designed by an expert for beginners but still capable of contest performance.

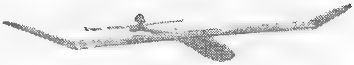
G/933 * 3/6

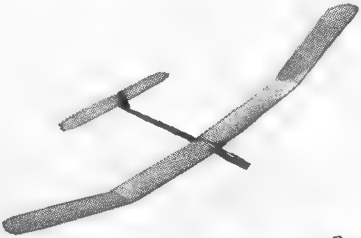
HANGER By T. Faulkner

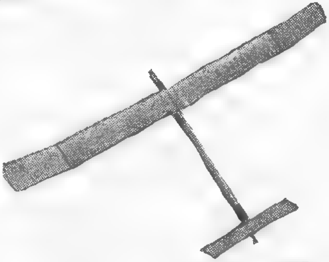
A simple glider fuselage, specifically designed for magnet steering. Is suitable for almost any set of A/2 surfaces.

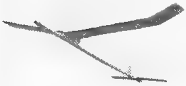
G/972 *-* 3/6

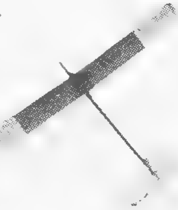


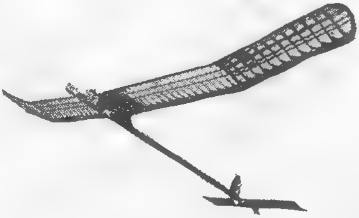


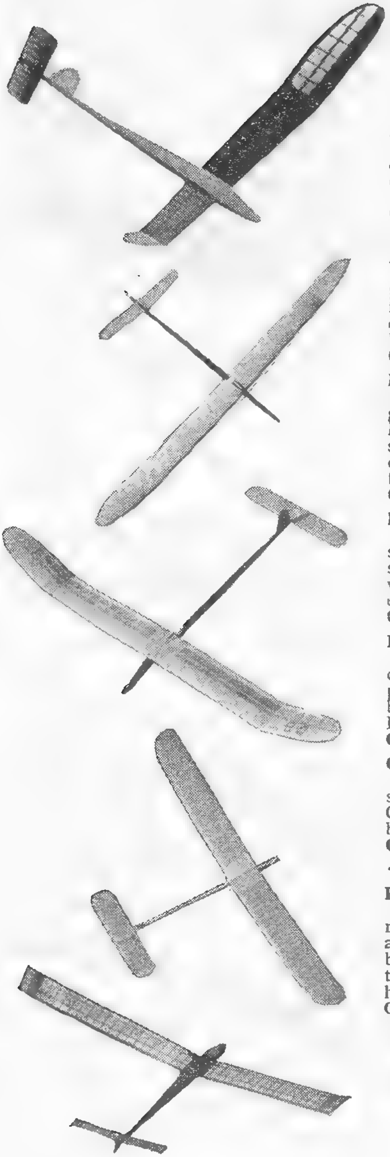


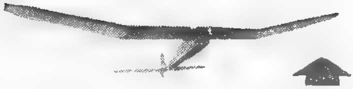












SUNSPOT By R. Yeabsley
Outsize ultra-lightweight sailplane of easy construction, and holder of many contest honours. (Weight 2¼ lb.) Span 120 in.
G/283 * * 8/6

ALTAIR By G. T. Lefever
High aspect ratio A/2 design which placed top in the 1955 British Trials. A fine all-weather flyer, this model has been developed through four flying seasons. Wing span 79 in.
G/602 * * 6/-

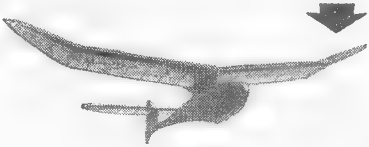
M.P. 12 By Max Hacklinger
The elite amongst International A/2 class gliders, this 86 in. span German design by Max Hacklinger will reward the conscientious modeller who likes intricate detail in construction. Has many novel features.
G/573 * * * 6/-

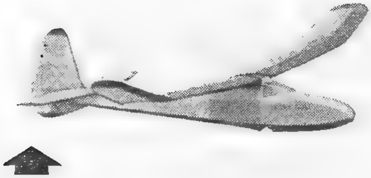
LUCIFER By Bob Amor
Second place in 1956 World Championship gained by this outstanding 75-in. span British design with latest style thin wing section and slender fuselage. An efficient all-weather design.
G/645 * 6/-

PJERRI By B. Hansen
Tough structure on this all-weather A/2 design by Danish Champ. Model has a long pedigree of contest success. Simple to build, very strong. Span 69 in. Uses Hansen's own special airfoils.
G/767 * * 7/-

OMEGA By D. Aldridge
The 1955 Queen's Cup Winner, a very simple A/2 with excellent contest record. Constant chord wings make it suitable for beginners. Wing span 64 in.
G/614 * 5/-

LEPRECHAUN By R. A. Twomey
This low-aspect ratio sailplane is remarkable for the astounding performance achieved straight from the design board. First flight was 20 min. 20 sec., and the original has more flights of over ½ hour than under to its credit. Span 103 in.
G/370 * * * 11/-





IVORY GULL By R. F. L. Gosling

Probably the most popular glider in our range, many hundreds of this model have been built and successfully flown. First-class performance. Span 50 in.

G/148 * * 5/–

EVANDER By D. R. Murrin

Robustly constructed model for the enthuiast. Has fine flying qualities. Span 66 in.

G/224 * * 6/–

FIGHTER GLIDER By D. M. Dent

An interesting glider based on a fighter design outline. Very realistic in flight. Span 42 in.

G/107 * * 3/6

WHIZZLER By Captain K. Laumer

For the "pocket-money" restricted youngster of seven to 12 years of age, this is a perfect hand launch (throw) glider introduction to our fascinating hobby. It takes little money and skill to produce a Whizzler capable of providing endless fun. A real toughie 24 incher.

G/791 * 2/6

DAEDALUS By O. Roser

A Hungarian design featuring Jedelsky all sheet wing structure, of high aspect ratio. World Championship class performance. Span 88¼ in., was flown in the 1959 Internationals.

G/748 * * 5/–

THERMALIST By R. Minney

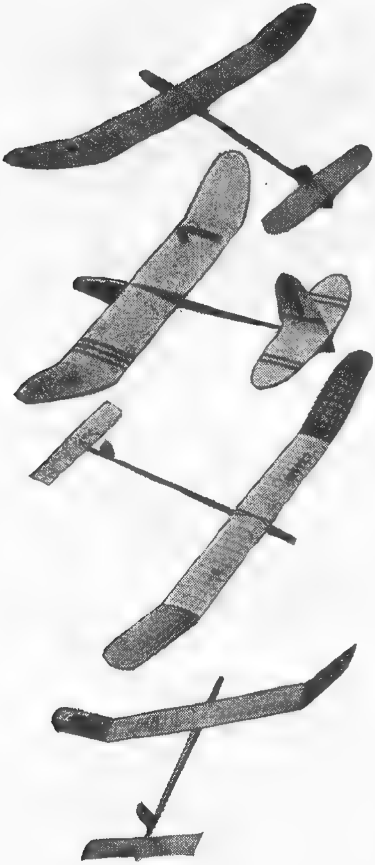
Largest size sailplane to F.A.I. limits. Cabin type slabsider, even chord wings with elliptical tips. Span 137 in.

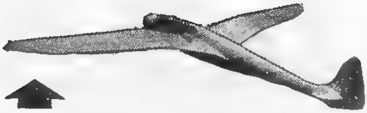
G/306 * * 13/6

HOVERKING By P. Gilbert

Slope soarer by one of Britain's most expert sailplane builders. Simple structure, neat appearance, has been used with towline and R/C. Span 72 in.

G/379 * * 5/–





D.F.S. REIHER By P. M. H. Lewis
An unusual scale prototype. This 6 ft. 3 in. wingspan glider has all the grace of the original.
MA/315 * * **7/6**

SUP By R. Cizek
A Czechoslovakian A/1 developed directly from a Wakefield Cup winning rubber model. Elliptical wing and tail surfaces with clean lines give it a high performance.
G/863 * * **3/6**

CHICK AND CZECK
Two full size all sheet gliders. Hours of fun and cheap to build.
G/905 * **2/6**

TZIGANE By E. Black
High performance A/2 glider with sheet covered fuselage and geodetic wing and tail bracing.
MA/393 * * * **5/6**

WICHITA—5 By M. Woodhouse
A high performance A/2 glider with simple construction and geodetic tailplane. Full auto rudder and timer details. Winner of many contests.
MA/404 * * **7/6**

Not Illustrated

CHUCKGLIDERTRIO
Three fine designs for all balsa chuck gliders.
G/958 * **3/6**

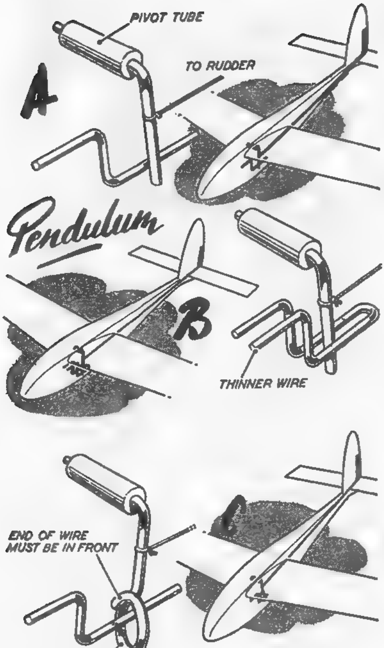
Not illustrated

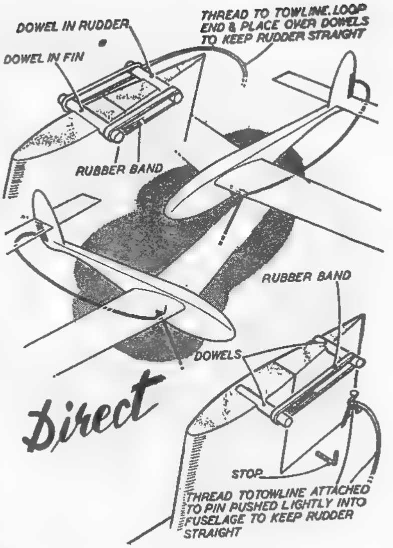
OCTET
Eight all-balsa chuck gliders including scale versions of the famous Hawker Hunter, Sabre and Super Sabre designs in a complete course of flying with this type of model. Perfect for club groups, this inexpensive introduction to aero-modelling takes one from the elementary stage up to the high performance American record-holding all-balsa chuck glider design.
U/657 * **2/6**

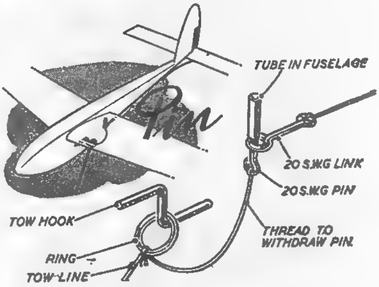
Auto Rudder Sketch Page

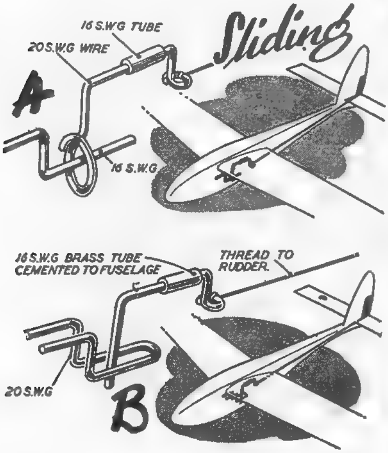
Gliders must tow straight and circle for flight . . . .

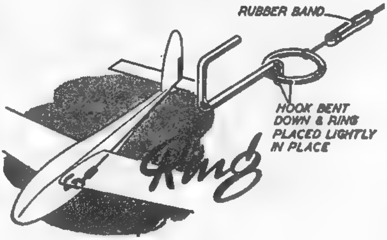
These sketches show how the rudder is released for turn when the towline is cast off.


Pendulum
A
PIVOT TUBE
TO RUDDER
B
THINNER WIRE
C
END OF WIRE MUST BE IN FRONT
OVAL LOOP—NOT ROUND.

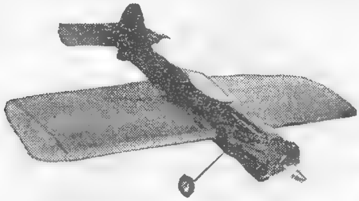

Direct
DOWEL IN RUDDER
DOWEL IN FIN
THREAD TO TOWLINE. LOOP END & PLACE OVER DOWELS TO KEEP RUDDER STRAIGHT
RUBBER BAND
RUBBER BAND
DOWELS
STOP
THREAD TO TOWLINE ATTACHED TO PIN PUSHED LIGHTLY INTO FUSELAGE TO KEEP RUDDER STRAIGHT

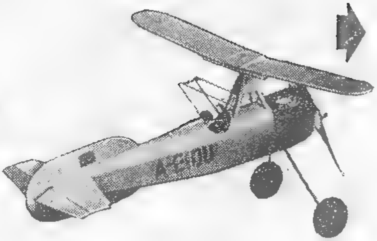

Pin
TUBE IN FUSELAGE
20 S.W.G LINK
20 S.W.G PIN
THREAD TO WITHDRAW PIN.
TOW HOOK
RING
TOW-LINE

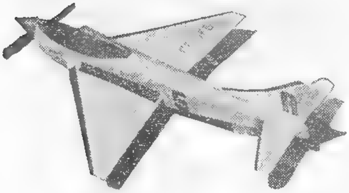

Sliding
A
16 S.W.G TUBE
20 S.W.G WIRE
16 S.W.G
16 S.W.G BRASS TUBE CEMENTED TO FUSELAGE
THREAD TO RUDDER.
20 S.W.G
B


Ring
RUBBER BAND
HOOK BENT DOWN & RING PLACED LIGHTLY IN PLACE

C/L Sport Models







TUFFY By M. Maude
A really tough control line trainer, will bounce off most crashes if covered in nylon. Plywood engine protector and simple structure, 28-inch span.
CL/829 **D, E, F.** * **3/6**

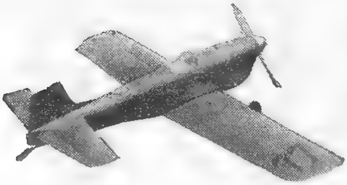
SKYHAWK By L. Ellis
New look in team racers with delta wing from Canada, trike u/c and very simple construction, meets the S.M.A.E. Class A specification. 18-in. span.
C//679 **G.** * **5/-**

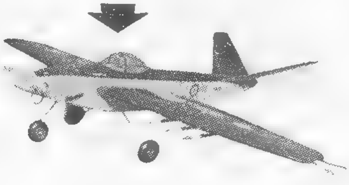
PERCIVAL MEW GULL
By H. C. Thomas
Accurate scale Team Racer, capable of 75 m.p.h. with a plain bearing engine. Wing span 24¾ in.
CL/600 **G.** * * * **4/-**

CUPID By Ron Moulton
Near-scale lines of this small Team Racer make it suitable for pure sport flying as well as contest work. 20-in. span, with novel wing construction in sheet, and neat u/c it flies at 70 m.p.h. with A.M.15.
CL/708 **D, E.** * * **4/6**

SORCERER By P. Cameron
Ten final placings in twelve major contests make this an outstanding Class "B" racer. Easy but rugged construction, fast and stable flight. Span 27½ in.
CL/544 **J.** * **4/6**

VEDETTE By W. I. Barrett
An unusual C/L stunt/sport design featuring mid wing, vee tail and tricycle undercarriage to give distinctive appearance. Wingspan 30 in.
CL/975 **E, F** * * **6/-**





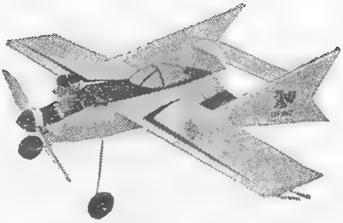
TYRO GYRO

By D. Longman

An unusual control-line autogiro powered by a 1 c.c. engine. Rotor diameter 19½ in.

MA/139 E * 5/-

(See also Unorthodox Section)



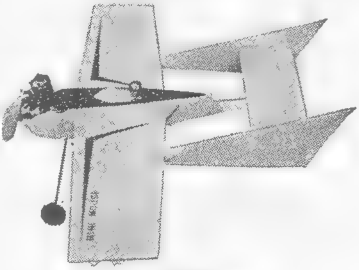
SUPERMOUSE

By K. A. Day

Rat Racing remains unhindered by detailed rules, and will appeal to the many individualists.

Top line performance does not necessitate "tuned" engines. Models are easy to build and fly. This larger version for 5 c.c. is 27 in. span, flies at 80 m.p.h. or more.

CL/823 G, H, J, K. * * 5/-



MINI-MOUSE

By K. A. Day

For the smaller engines 1.5 to 2.5 c.c. this **mini-rat-racer** fills the bill ideally for those who want quick (and cheap) results. Span is 22 in.

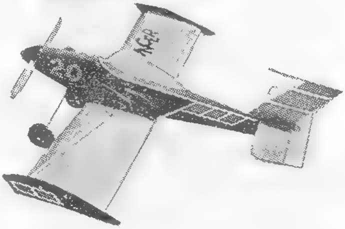
CL/825 E, F, G. * 5/-

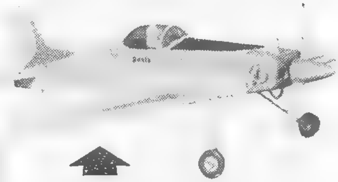
BOUNCER

By P. Mcir

As a first attempt at control line flying this 24 inch trainer for 1–1.5 c.c. engines cannot be beaten. Full instruction sheet included contains details for a Rigidrist" control line handle to teach correct pilot technique. The ideal trainer.

CL/808 D, E, F. * 5/-





DUSTY

By I. Barrett

An unusual 26 in. wingspan, C/L sports model combining good looks and detail for flour spraying by third line, together with simple construction. Very easy to fly.

CL/9 F * 3/6

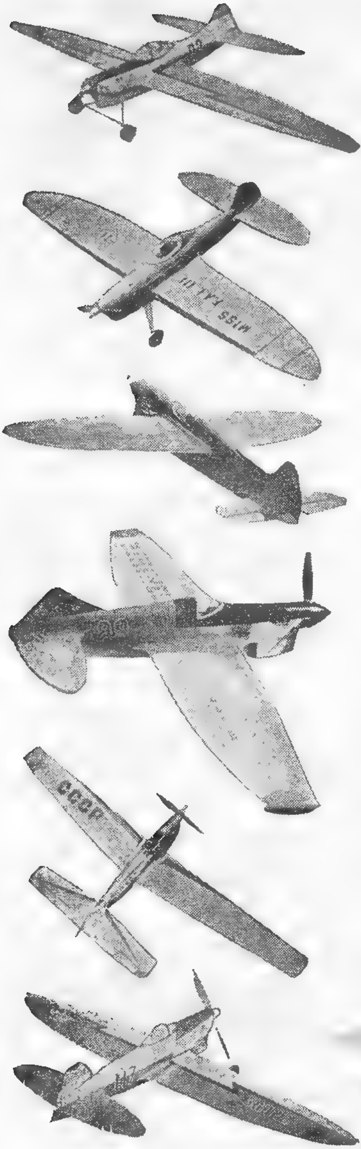
GRMZPF

By D. Burke

A 36 in. wingspan **Rat Racer** from America, fast, semi-streamline.

CL/940 * * * 5/-

C/L Team Racers



TIGRESS By Ken Long
One of Britain's most successful current rule F.A.I. class team racers. The design has been thoroughly and practically tested over a long period by the Wharfdale team. First in the 1960 British team selections and placed 4th in 1960 World Championships, has beaten 5 mins. for the 10 kilometer distance many times. Span 38½ in. for 2.5 c.c. engines.
CL/741 G. * * 5/-

MISS F.A.I. By Kjell Rosenlund
Beautifully proportioned F.A.I. class Team Racer by Sweden's master of the art and winner of the 1961 Criterium of Aces in Brussels. A genuine 100 m.p.h. plus racer. High aspect ratio, 35½ in. span elliptical wing.
CL/778 G. * * 5/-

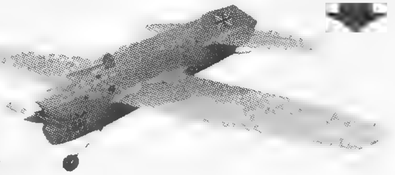
RAZZAMACHAS By C. Taylor
Fast, monowheel Class B racer delivers top line performance with a standard unreworked ETA .29. Plan incorporates the all-important prototype tank detail. Span 30½ in. for 5 c.c. engines.
CL/803 J, K. * * 5/-

COUNTDOWN By R. Place
Our first S.M.A.E. class ½A team racer, to latest 1964 specifications. A performance of 80 m.p.h. with 45 laps per tank has given this 25½-inch span model many contest wins. Very tough construction.
CL/833 E, F. * * 5/-

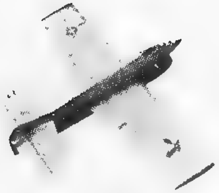
FRESCO By B. D. Chkourski
A World Championship winning model as flown by the U.S.S.R. team. Many new features are shown including tank details, 38 inch span.
CL/845 G. * * * * 5/-

DALESMAN By K. Long
A very successful S.M.A.E. class B team racer. First class contest record including placings in most of the big competitions throughout the country, and first in the 1960 National Championships. Embedded metal motor mount, and fuel tank detail. Span 33½ in. for 5 c.c. engines, particularly the ETA 29.
CL/763 J. * * 5/-

MISTRESS By B. Turner
A top British F.A.I. team racer, of 38 in. wingspan. Simple and quick construction, yet with all the latest design features.
CL/943 G * * 5/-

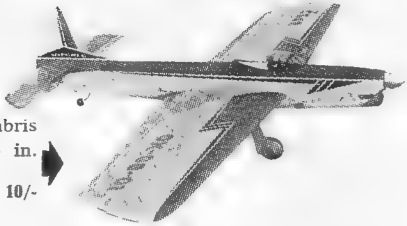


JEFE-II By H. Stockton & D. Jehlik
1965/7 European Champ 1966 World Champ Team Racer, simple yet the best, 28 in. for 2.5 cc.
CL/932 G. * * 5/-



World Champion's Models

C/L Stunt

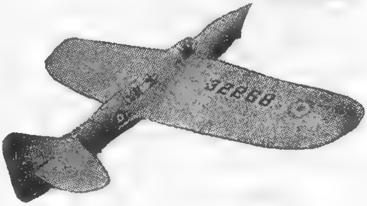


SUPERMASTER By J. Gabris
1966 World Champ stunt model 55 in. for .33-.45 c.c. engines
CL/930 K, L, M, N. * * * 10/-

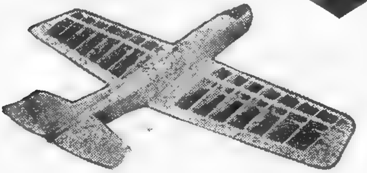
ZLIN 226 By F. Warburton Snr.
Another large semi-scale C/L stunt model designed by an acknowledged expert in the class. Featuring adjustable lead out position for final trimming. Span 50¾ in. for .35 cu. in. motors.
CL/955 J, K. * * 10/-

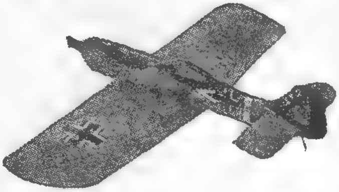
FIREFLY By F. Warburton
A semi-scale stunter designed by one of the country's top stunt men. Span 57 in. Suitable for 5.8 c.c. engines, drawn on two sheets.
MA/371 J, K. * * 7/6

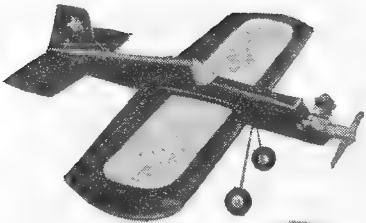
WOLVERINE By H. C. Quek
A 40 in. span stunt trainer with easy construction, profile fuselage based on the F.W. 190, having wing flaps for extra manoeuvrability.
CL/866 G, H, J. * 5/-

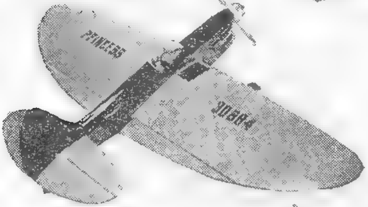


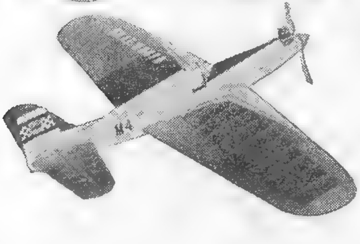
SPARTAN By A. J. Dorrell
Sleek stunt/combat model with removable wings, has external leadouts and ruggest construction. Spaa 41 ins. for 2.5–5 c.c. engines.
MA/378 G, H, J. * 4/6

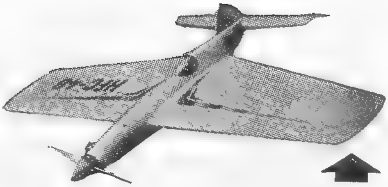












DRAGOON By Hoh Fang-Chiun
A sleek stunt combat model capable of exceptional performance with simple design and construction. Span 37 in. for engines of 2.5–3.5 c.c
MA/342 G, H. * 5/-

FOXSTUNTER By J. W. Coasby
A fully flapped stunter capable of very tight manoeuvres and high speed stunting. Span 42 in. Area 350 sq. in.
CL/406 J, K. * 5/-

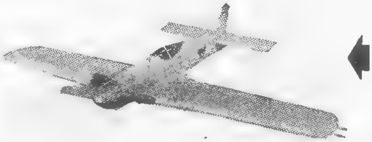
SHARPOON By K. Laumer
A 36 inch span aerobatic trainer for 1 c.c. to 1.5 c.c. engines (larger sizes can be used by experienced fliers) that combines good looks with simplicity. Trike undercarriage.
CL/806 D, E, F. * 5/-

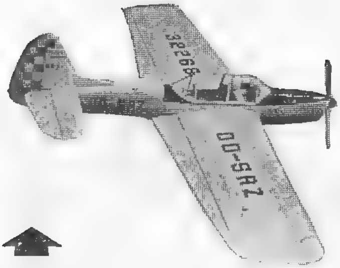
RED DRAGON By. H. C. Quek
An attractive semi-scale profile stunter based on the Mitsubishi A6M5 Zero-Sen, tough construction, 40 inch wing span.
CL/842 G, H, J. * * 5/-

JUGGLER By C. Bates
A simple stunter, featuring sheet fuselage sides, ballon tank, 270 sq. in. area. Span 38 in.
CL/389 H, J. * 5/-

PRINCESS By G. Cornell
Elegant, up-to-date and a beauty to fly, this 34 in. elliptical winged model is happy with 1.5 or 2.5 c.c. engines and will go really "square" in the S.M.A.E. Stunt schedule. Extensively detailed plan with many installation sketches.
CL/724 F, G. * * 6/6

COY LADY By R. E. Brown
This 580 square inch stunter for 5 c.c. upwards will fly through all "square" manoeuvres in the latest stunt schedules, and has been designed to incorporate all latest ideas for smooth flying, wingspan 54 in.
CL/727 J, K. * * 6/-





STAMPE MONITOR

By F. L. Warburton

56 in. span semi-scale control line stunt model with 610 sq. ins. wing area for really top class aerobatic performance with large 5 c.c. to 10 c.c. glow motors. A first class design by one of Britains most expert fliers with all the most modern and desirable features.

CL/820 J, K, L, M. * * * 10/-

THUNDERBOLT

By W. Morley

Large stunter for those who like smooth manoeuvres on long lines. Big 48¾ in. wingspan, has flaps and all modern features.

CL/587 H, J, * * 6/-

AMBASSADOR

By A. Hewitt

Probably one of the best known stunt models ever, and certainly one of the best performers. Span 35½ in. A Gold Trophy winner.

CL/457 G. * * 4/-

SKUA

By D. Christopher

Jet-like lines on the 47⅜ in. span stunter for 3.5–5 c.c. engines. Coupled flaps and elevators. Long nose for smooth manoeuvres. Follows the 1960 design trend for construction. Will "square" and fly in all conditions.

CL/771 H, J. * * 7/6

SKIFFLER

By D. Platt

Streamline semi-scale full aerobatic stunter with coupled flaps and thick wing section for square manoeuvres; 47 in. span, 420 sq. in. wing area.

CL/665 H, J * * 7/6

SPACEHOUND

By J. Sirotkin

The very latest in large stunters, placed 2nd at 1963 Criterium of Aces and 5th at 1962 World Championships, 55 inch span. Features ducted cowl, spatted wheels and "jet lines".

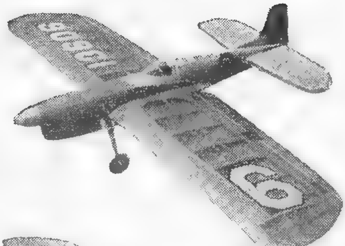
CL/846 K, L, M, N. * * * * 10/-

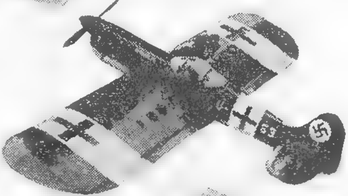
WILDFIRE

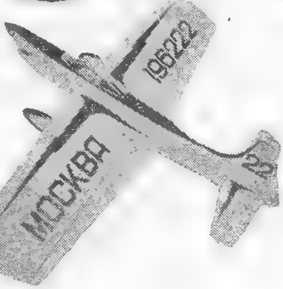
By G. Stowers and E. Taylor

A good looking cabin stunt model. Ultra streamlined, resembles a fighter aircraft. Span is 27½ in., 133 sq. in. area.

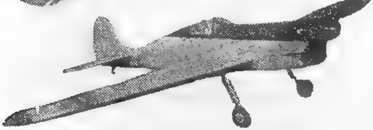
CL/364 F, G. * * 3/6

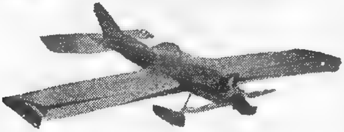


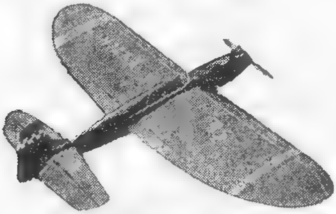


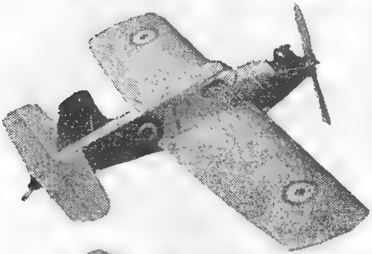


C/L Stunt









SCIMITAR By W. Morley
A stunt model for 2.5–3.5 c.c. engines, which will perform all the manoeuvres in the S.M.A.E. stunt schedule open cockpit racer lines. Span 45 in.
MA/270 G, H. * * 7/6

COUGAR By T. W. J. Stoker
45-in. coupled flap design with easy sheet fuselage assembly and thick wing section. Ideal for stunt beginners.
CL/673 H, J. * * 5/-

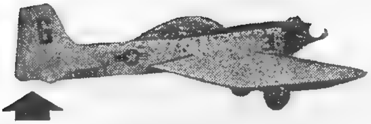
334G By Peter Russell
Gold Trophy winner in 1956 and a fine stunt model with fighter-like appearance, this was the most popular plan for 1956 in the controline sphere. 42 in. model.
CL/632 G, H. * * 6/-

SIMPLE SIMON By W. P. Holland
This 28 in. span model for 1.5 c.c. is fully stuntable, and also makes a neat, easy to build trainer with 1 c.c. Handsome, raked lines are in keeping with latest design trends and the semi-scale appearance leads itself to bright decoration.
CL/773 D, E, F. * 3/-

CALAMITY JANE By P. Weaver
Australian stunter by Queensland's crack stunt flyer. A big model that is a certain "full-stunt" job of top contest standard. Span 50 in. Area 510 sq. in. and weight 28 oz.
CL/489 J, K. * * * 6/-

RASCAL By R. G. Moulton
Special stunt trainer will fly the "book" on low power, uses new style thick section, fully detailed, eighteen stage instructions on plan. Ideal for modellers wanting to learn how to loop; the favourite design for 1 c.c. aerobatic flying. 26 in. span.
CL/660 D, E, F * 4/-

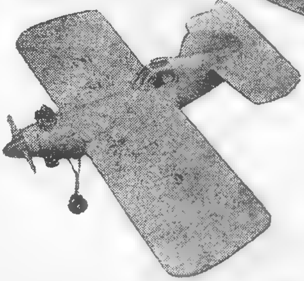
U-2 By F. L. Warburton
54 in. span full aerobatic controliner for 5 c.c.–8 c.c. engines, by one of Britain's leading aerobatic fliers, based on the headline making Lockheed U-2 aircraft to give a steady line pull throughout all stunt manoeuvres and smooth take-offs and landings.
CL/798 J, K, L. * * 10/-



GRIFFON
By Dave Platt

A fully aerobatic sports/stunt model of semi scale lines for 1–1.5 c.c. engines. Span 32 in.

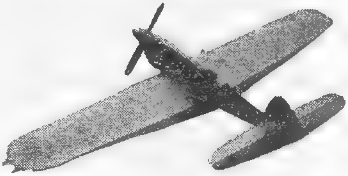
MA/292 F. * 5/-



CHESHIRE KITTEN
By W. A. Pollard

Very easy to make and surprisingly aerobatic despite the small engines it normally carries, this design is one of the most popular small stunters in our range. Only 21 in. span.

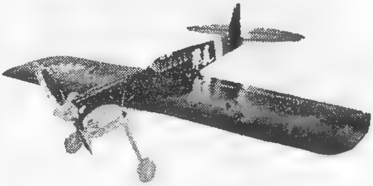
CL/693 B, C, D. * 5/-



HOPIT
By E. Higlett

An easy to build cabin stunter. 275 sq. in. wing area. Span 35 in.

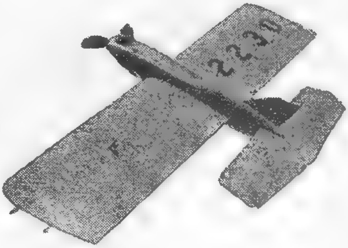
CL/417 H. J. * 5/-



ELF CAT
By J. H. Bailey

Designed to meet the demand for a 1–1.5 c.c. stunter, this 32 in. model has wing flaps, racing lines and easy construction.

CL/703 D, E, F. * * 3/6



FLYING TIGER
By H. C. Quek

A very lively semi-scale profile stunt trainer or combat model, based on the Curtiss P-40 Tomahawk. 40 inch span.

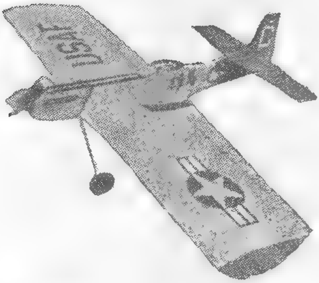
CL/843 G, H, J. * * 5/-

BLUE PANTS
By Henri Stouffs

Thick-wing stunt design flown to win the aerobatic class in the 1954 World (control-line) Championships at The Hague. Span 39 in.

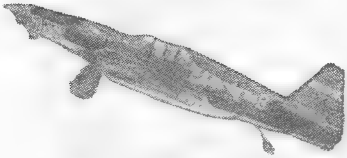
CL/574 G, or H. * 4/6

Control Line Stunt

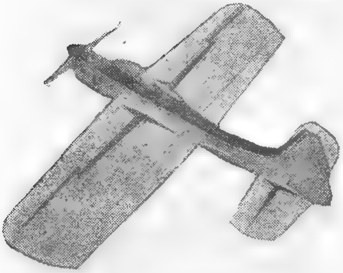


COY-KAT By R. Brown
A contest-proven stunt design has won the Gold Trophy at the Nationals. Span 54 ins. Suitable for 5–6 c.c. engines.
MA/344 J, K. * * 7/6

STALLION By H. C. Quek
Profile fuselage 39 in. span flapped stunt trainer based on the Mustang W.W.2 fighter, an ideal basic trainer.
CL/865 G, H, J. * 5/–

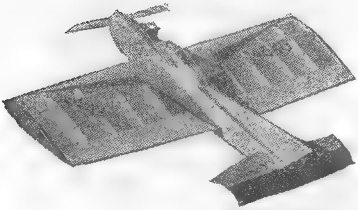


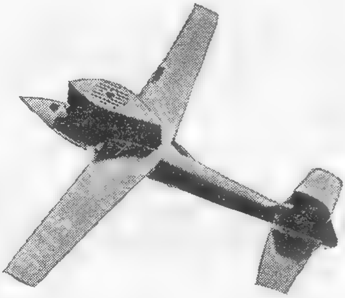
MUSTUNT By E. Bjornwall
Very attractive 51½ in. span stunter from Sweden, based on the North American P-51 B, combines the best of Palmer and Aldrich design feautres with semi-scale appearance.
CL/878 J, K, L. * * 10/–



SPACEBOUND By M. Constant
A snappy little 1.5 c.c. 33½ in. span stunter based on the lines of "Spacehound" our other large Russian stunter.
CL/906 E, F. * * 6/6

SKYBOLT By C. A. Foss
A diminutive 18½ in. span control line stunt trainer to suit 0.5–0.8 c.c. engines. Ideal for the novice.
CL/908 * 3/6





Combat

SLICK SCHICK By D. Sparkes

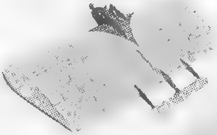
A tough ½A Combat wing of 23 in. wingspan for 1-1.5cc motors.

CL/968 F * 3/6

TURNCOAT By M. J. Morris

29 in. top selling combat design for 2.5 cc.

CL/926 G. * * 3/6



RIOT ACT By A. Longhurst

A fast class B Combat design with all mowing elevator mounted on booms. An extremely robust 34½ in. wingspan model.

CL/956 H, L. * * 7/6

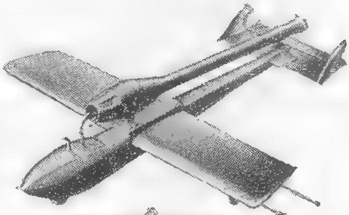
EARLY BIRD By R. Wilkens

28¾ low aspect ratio flying wing type combat model with a great reputation. Extremely tough and manoeuverable. (Illustration as Mini Early Bird).

G, H. * 3/6

Limited stock—quote name only (no code No.). See illustration of Mini version on page 82.

Speed



JET TRAINER By R. C. Jude

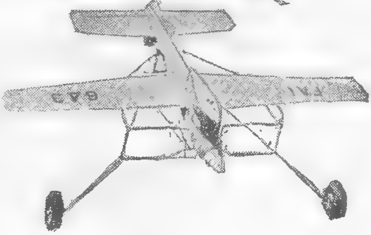
A simply constructed basic trainer. Span 30 in.

CL/318 * 3/6

GIN MILL By Gus Johnson

The most reliable class V speed model yet. A winner for seven years. Flies hands off "with in the groove" performance. Has done over 160 m.p.h. with mono-line control. 20-in. span, with special wing section.

CL/828 N. * * * 5/6

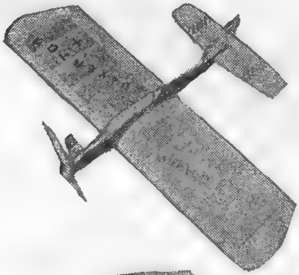


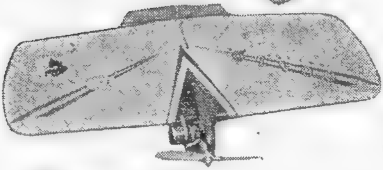
DEVIL By U. Rossi

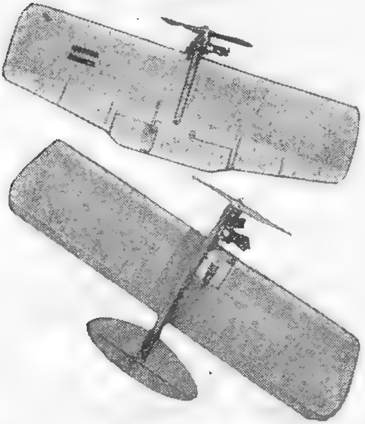
An F.A.I. class speed model from Italy, with exceptional contest record, including first place at the 1959 Criterium of Aces in Brussels and 1960 World Championships. Model has done 145 m.p.h. Simple to build. Span 21¾ in. Engines 2.5 c.c. Based on the Italian light alloy speed pan, marketed by Rossi.

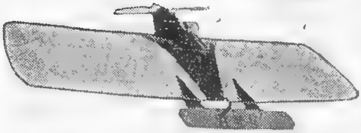
CL/749 G.

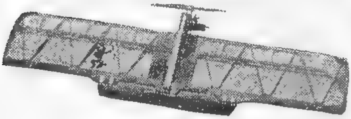
C/L Combat

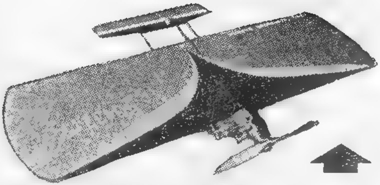












SEPTEMBER WARRIOR
By B. Bumstead

Class A combat model with sparless wing, laminated leading edge and all moving tailplane supported on piano wire outriggers. Tough and easy to construct.

MA/385 G, H. * 3/6

KETCHUP By R. Walden

Profile fuselage stunt trainer with simplest possible construction, ideal novice model. Span 28 ins. 1.5 c.c. engine.

CL/886 D, E, F. * 3/6

DOMINATOR By M. Davis

A 28 in. span fast flying combat wing 1965 Criterium of Aces winner and contest flier's favourite.

CL/893 G, H. * 3/6

DUELLIST By Adolpho Tristany

Spanish Combat Champ, will turn on a sixpence, cheap to make, indestructible when silk covered. 32¼ in. span for wide variety of motors.

CL/648 G, H. * 5/-

MINI BUNT By S. Spencer

Club type 1/2A Combat model, developed from "Stoo" Hollands Flingel Bunt. Span 24 ins.

CL/901 D, E, F. * 3/6

STREAMER EATER By A. Ytreoy

All moving tailplane, flying wing from Norway. Rugged consruction and tank details, meets F.A.I. regulations. 30 in.

CL/883 G, H. * * 3/6

CLEAVER By G. Copeman

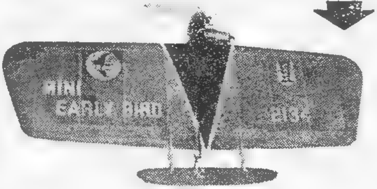
Here's the Combat model with more cuts to its credit than your modelling knife. High speed, manoeuvrability, smoothness of flight, efficient tank go to make a top-notch design. 35 in. span for 2.5 c.c. to 3.5 c.c. engines.

CL/799 G, H. * * 5/-

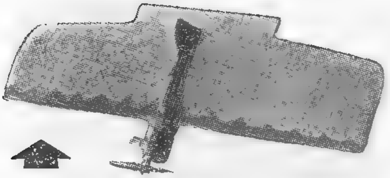
MINI EARLY BIRD By R. Wilkens

Full aerobatic 1/2 A Combat model based on the sensational "Early Bird" model that has been so successful in contest. Extra tough construction and building instructions. Span 22 ins.

CL/904 D, E, F. * 3/6



C/L Combat



FLIP By R. H. Warring

An ideal beginner's C/L trainer/combat model. Span 25½ in. length 9 in. For engines of 1 c.c.

MA/276 D * 5/-

PEACEMAKER By G. Aldrich

Specially commissioned design for British combat by American champion stunt flyer, has amazing manoeuvrability with radical design approach. Capable of all manoeuvres including square figure eights. Span 36½ in.

CL/687 G, H. * * 5/-

SPLATT By M. J. Platts

A "½A Combat" design to meet the growing demand in club competitions, this little simpleton is 7 ozs. of zippy controliner for 1-1.5 c.c. engines. With 20⅜ in. span, it will fly at over 80 m.p.h. without a streamer.

CL/785 D, E, F. * 3/6

PEDRO By L. Whalley

Combat or stunt model of top contest standard all sheet tail and fuselage construction, cheap to make, suitable for experts or beginners. Span 32 in.

CL/704 G, H. * 5/-

RAZOR BLADE By P. N. Tribe

Leading British Combat "Wing"—a fast flying and very manoeuvrable model for the up to 3.5 c.c. class. Will withstand loads of punishment. Span 32 in.

CL/729 G, H. * * 5/-

UNLIMITED By R. Smith

This most unusual flying wing type of controlliner has proven practically indestructable in the hands of absolute novices. Capable of all known stunts, the method of construction is simple yet amazingly rugged. Span 20 in.

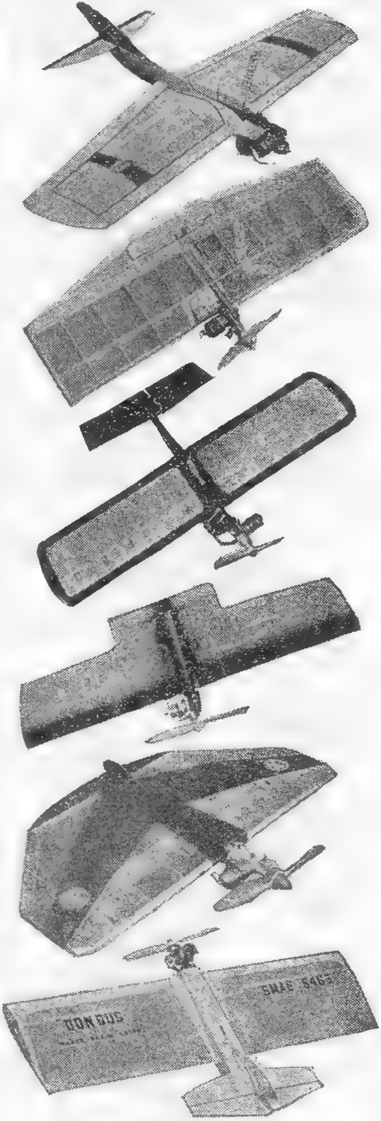
CL/369 F, G. * 4/-

DONGUS

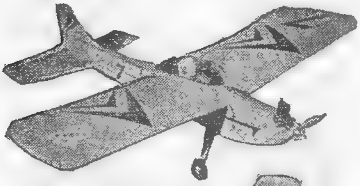
By G. Johnson & D. Pinckert

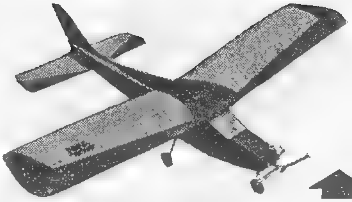
Join the Combat brigade with this hot design from two leading U.S.A.F.E. flyers. 30¼ in. span for 2.5 to 3.5 c.c. motors, designed to be simple to build, but extremely strong. Does 86 m.p.h., using a 3.5 c.c. glow motor.

CL/780 G, H. * * 5/-



Radio Control





SCHOOLMASTER By K. Willard

Produced in co-operation with Top Flite models this 39 in. span single channel model has an all sheet covered structure with motor, rudder and kick up elevator controls.

RC/875 D, E, F. * * **6/6**

GASSER By Ken Willard

Leading American single-channel radio design by the leading expert in this field. Designed as a pylon racer, but equally spectacular as an aerobatic machine. Simple to build, and sparkling performance. Not recommended as a first R/C model. Span 40 in. For engines 1.5–2.5 c.c.,

RC/744 F, G. * * **6/6**

BICKI By Alfred Bickel

Outstanding design that has won highest international honours two years in succession. Swiss Nats. winner, both in glider and power versions as detailed in this plan. Will tow to 650 ft. altitude or more, a fine R/C subject for the radio beginner. 85 in. span.

RC/628 C, D, E, G, H. * * **7/6**

PUSH MOTH By D. Boddington

Single channel behind the wing pusher engine sports flier. An ideal Sunday flier for aileron control, via Conquest escapement.

RC/895 C, D. * * **7/6**

SWANNEE By J. Bowmer

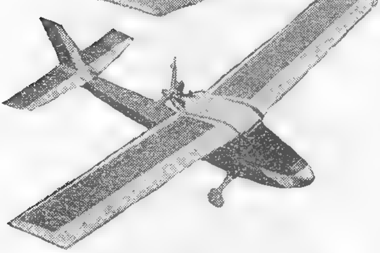
Low wing all sheet covered single channel model fast and aerobatic has multi "Taurus" lines in miniature. Span 38 ins. for .8 c.c. engines.

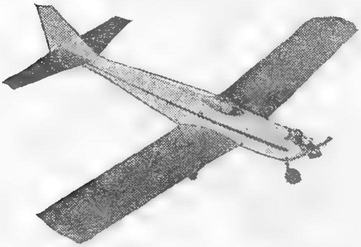
RC/898 C, D. * * **3/6**

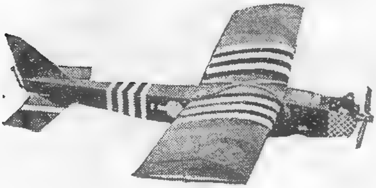
BAZZ BOMB By B. Murley

A 37½ in. span highly aerobatic single channel model. Fast and easy to construct, for experienced radio control fliers only.

RC/868 F, G. * * **7/6**



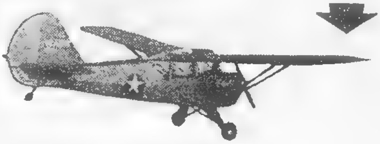




AERONCA GRASSHOPPER
By E. Fernley

An accurate scale model for radio-control drawn on two sheets. Span 58 in. Suitable for 2.5 c.c. engines.

MA/281 F, G. * * **10/-**



JUMPING GEMINI By D. Tafler
A simple, fast, single-channel model for 0.049 glow motors and miniature receivers, 28 in. span. An R/C "Hot-rod."
RC/839 C, D * * 3/-

WIZARD OF OZ By J. H. Osborne
A simple glider with 48 in. span for radio control slope soaring, tough slab sided fuselage takes single channel. Definite recommendation for starting slope soaring.
RC/903 * 8/6

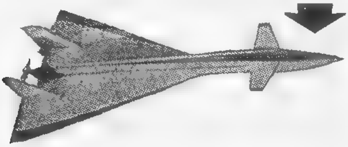
SKYSCRAPER By C. Foss
Convertible sports F/F or R/C, 28 in. span model with modern lines and tough construction.
PET/RC.889 C, D. * 3/6

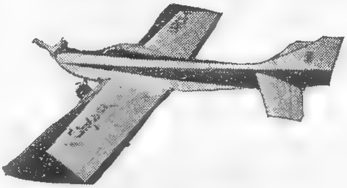
SKYLINER By M. Franklin
Multi control aerobatic low wing design complete with radio installation details for motor elevator and rudder with full span ailerons. Simple construction for 8–10 c.c. engines. Span 62 ins.
RC/858 M, N. * * 10/-

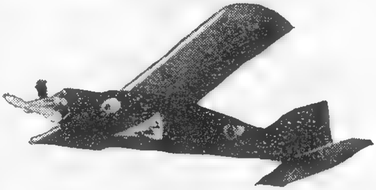
SHARKFACE By E. Clutton
Rudder only 22 in. span aerobatic model, simple construction, knock off engine mounting. Claimed to be almost indestructible.
RC/887 C, D, E, F. * 3/6

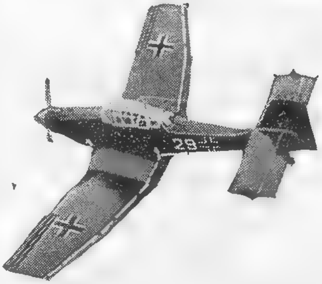
JUNKERS JU 87D By F. Arigaya
A 41 in. near scale model for rudder only R/C and 1.5 c.c.–2.5 c.c. engines, scale deviation are shown. A top seller.
RC/884 E, F, G. * * * 10/-

P.1174 By J. Crampton
Supersonic transport layout canard, all sheet single channel radio flier, with coupled twin fins. Pusher .8 c.c. engine.
MA/394 B, C. * 6/-

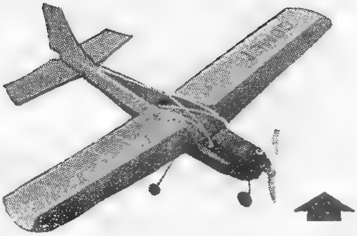






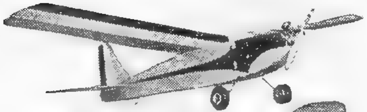


Radio Control



MINI COMET By Y. Machida
A delightfully, simple 37½ ins. span single channel R/Cer for 8 c.c. upwards. Choice of wing structure gives sedate trainer or hot aerobatic performance.
RC/892 D, E, F. * 6/6

WORKMASTER By R. G. Moulton
Beginner's semi-scale tough radio control model for simple single channel systems. Airframe is designed to give the greatest possible strength and still provide an easy to build model of light weight. Span 47½ ins. for 1-1.5 c.c. engines.
RC/821 D, E, F. * * 6/6



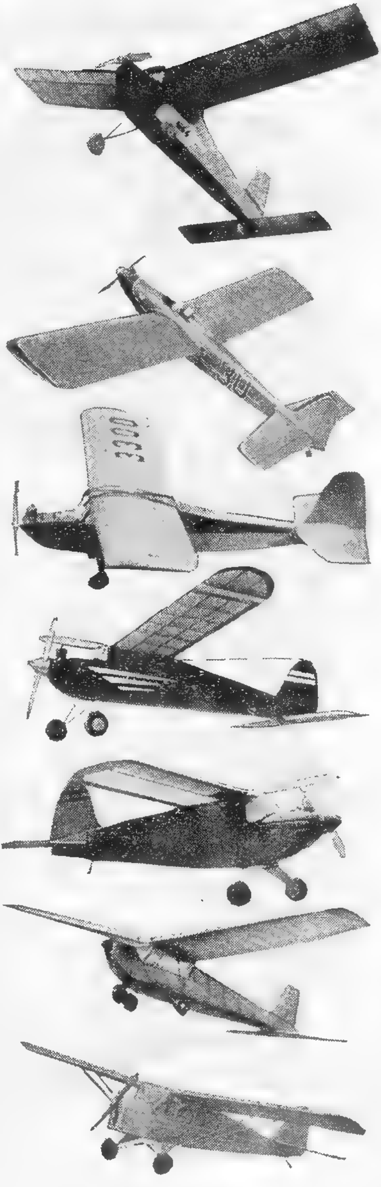
WAVEGUIDE By F. Burton
American style design for radio-controlled aerobatics, able to stand up to the rough and tumble of a heavy landing. Span 62 in. Capacious fuselage will take any receiver.
RC/592 G, H. * * 6/-

PAL JOEY By W. Winter
A 42-inch span beginners' radio model, for single channel rudder only using a relayless transistorised receiver. Specifically designed for 'Aeromodeller' readers by the leading U.S. designer of rudder-only models.
RC/852 C, D. * * 5/-

JUNE BUG By N. W. Davis
Tubby biplane for radio control or sport flying with many attractive features, flight proven over several years; has enclosed cowled engine. 48-in. span.
RC/670 G, H. * * 7/6

BLISTER By P. E. Norman
Designed by one of Britain's most ingenious modellers to AEROMODELLER specification for good looking, near unbreakable thrilling sports radio control model to suit 2.5 c.c. engines. Span 42½ inches.
RC/815 G, H. * * * 10/6

R.6-B By Allan Rowe
A 60 in. contest winner in New Zealand and a perfect trainer for beginners, this type structure eliminates undercarriage, unusual pusher design takes many of the risks out of one's first R/C venture. Glider etc.
RC/578 E, F, or G. * 6/-



CESSNA 172E By F. Arigaya
A 46½ in. span single channel R/C flying scale model for 1.5–2.5 c.c. engines. Rudder only or with flaps, ailerons, elevator, rudder, throttle and steerable nose which can be flown free flight A top seller.
FSP/RA 902 D, E, F * * * 10/6

ELECTRA By Vic Smeed
Designed as a stable and rugged model for beginners in radio flying. 54 in. span. Up to 14 oz. of radio gear. Ultra-simple construction.
RC/506 G, H. * 5/-

GEE STRING
By Bob Palmer & Dick Larsen
A 70 ins. span multi-channel radio control aerobatic design with attractive appearance. Will fly inverted with little down trim. For 6 to 10-channel radio equipment and 6 to 10 c.c., .35 to .60 cu. in. motors. A favourite in many countries.
RC/792 K, L, M, N. * * 10/-

LUMPERS By G. L. Harber
The ideal introduction to R/C flying, a really tough single-channel model, prototype flight tested through hundreds of flights in rough country of East Africa. Designed for the "Lone-hand" and widely praised since publication. 48 in. span.
RC/838 E, F * * 7/6

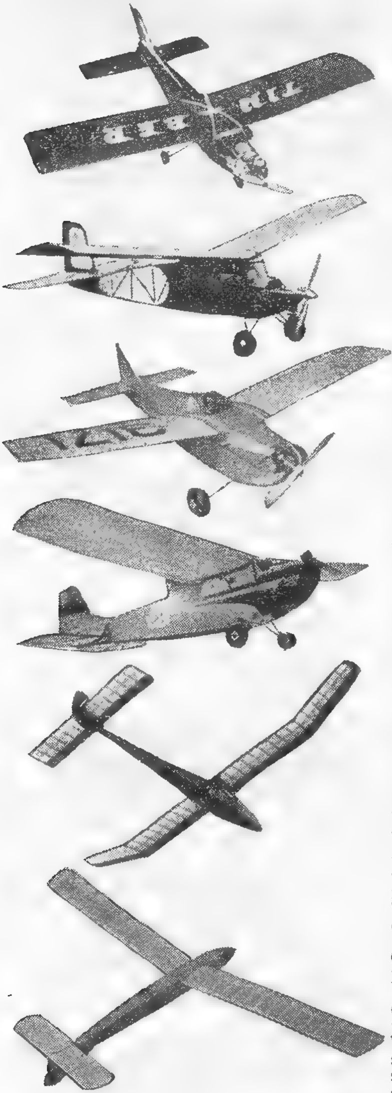
BAND BOY By Vic Smeed
A pleasant pure sport or radio control model for simple single channel radio systems of light weight. Perfect for the "Sunday Afternoon" flying session. Spans 36 in. for 1-1.5 c.c. engines.
RC/777 D, E. * 6/6

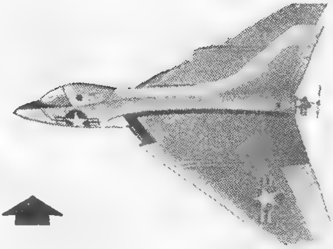
CHATTERBOX By Vic Smeed
For pure sport, or radio control, this smart 30-in. span cabin model is ideal. Takes escapement or "Galloping Ghost" control with lightweight radio equipment.
PET/RC 715 B, C * 5/-

RUDDER-BUG By Dr. Walter Good
The result of years of development work by one of the world's recognised experts. Of simple construction, the design is an outstanding, stable model of ample dimensions to house most types of equipment. Span 72 in.
RC/366 H, J. * * 11/-

GOLIATH By G. W. W. Harris
Semi-scale high-wing power model, cabin type based on the Auster. Suitable for Radio-control. Span 108 in.
RC/312 K, L, M. * * * 18/6

Radio Control





DELTA 707 By W. Biesterfeld
Radio "model of the year 1956", this 36-in. Delta, also suitable for sport F/F, is very easy to build despite its attractive streamline shape. For pusher engines.
RC/649 E, F. ✱ ✱ ✱ 6/-

TIMBER By W. P. Holland
A "quickie" Radio Control trainer for single channel rudder-only systems, this 36 ins. span 1–1.5 c.c. model features all balsa sheet covered wings and nose-wheel undercarriage for pleasant take-offs. A real "toughie".
RC/811 D, E, F. ✱ 6/6

ROHMA By S. Miller
A rugged R/C model for general flying or, without radio, an excellent sports design. Suitable for R/C beginners and will take most radio equipment. 64 in. span.
RC/546 H. ✱ 6/-

MINNIE By H. McEntee
Diminutive all-sheet lightweight for transistorised receivers, and escapements Radio equipment should not weigh more than 3½ oz. with batteries. Designed by an expert for relatively inexperienced modellers to enjoy miniature R/C model flying with Cox Pee Wee power. Span 24 in.
RC/766 B. ✱ ✱ 4/-

SMOG HOG By H. Bonner
America's Champion multi-channel design, capable of inverted flying, loops, bunts, controlled take-offs. Rugged construction, 74½-in. span, semi-symmetrical wing.
RC/659 H, J, K. ✱ ✱ 7/6

ARIES By G. Upson
Designed specifically for slope soaring with radio control, this glider has many unique and practical features to commend it as an ideal model for the purpose. 72 in. span, takes all forms of radio gear, original used the Hill set with Mighty Midget servo.
G/RC698 ✱ ✱ 6/6

BEACONEER By R. Godden
Simple 63 in. slope soarer for Radio Control operation. Will accommodate all types of R/C gear. Details on plan for Wright Relaytor and standard Rx/actuator systems. Detachable wing halves, specially strengthened fuselage with ply nose doublers. Single channel only.
RC/770 ✱ ✱ 7/6

ASTRO HOG By F. Dunn

Outstanding multi-channel 72 in. low-wing that has won all major events throughout the world. Aileron, motor, rudder and elevator control detailed in precise high standard drawings covering no less than three large sheets.

RC/699 K, L, M, N. * * * * 15/-

RATTLER By Charles Riall

56-inch miniature of Smog Hog specially designed for Galloping Ghost control. Superb plan detail includes wiring data and many practical features for crashworthiness. Highly recommended design for all pulse-proportional enthusiasts—offers "poor man's multi" control advantages with most manoeuvres possible, also a fast pylon racer.

RC/734 E, F, G. * * * 8/6

SPARKY By H. G. Hundleby

Highly manoeuvrable 48 in. radio control stunt model of simple, very sturdy construction and breath-taking performance.

RC/447 E, F. * * 5/-

UPROAR By C. Olsen

Symmetrical wing and small size make this a fully aerobatic design for multi-channel in the "hot-stuff" class. Simple construction aimed for easy repair work and inexpensive outlay. Winner of several British contests, and the outstanding R/C design of 1958. Span is 72 in.

RC/710 H, J radial only * * * * 8/6

PIKA By W. Lister

An ideal design with which to start out in single channel R/C. Tough construction will withstand much punishment, yet with a powerful engine the performance is up to contest standard. Span 58 in. for 2.5–3.5 c.c. engines.

MA/352 G, H. * 7/6

HALF TONE By D. Platt

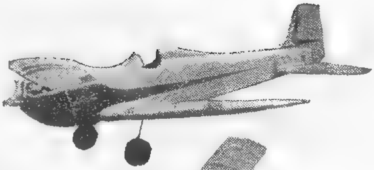
A very simple, tough little model with a sprightly performance for lightweight single channel R/C and 0.8 c.c. engines. Span 38 in.

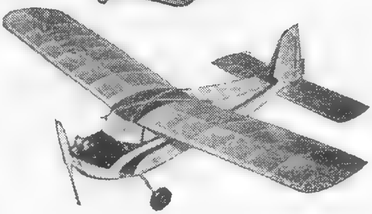
MA/357 C. * 5/-

UPLIFT By C. Olsen

A multi aerobatic model for "full house" 10 channel R/C needs or proportional. Low wing, trike U/C and constant chord wing ensure speedy construction and plenty of flying time. To suit 8 c.c.–10 c.c. engines. Span 66 ins.

MA/397 M. N. * * 10/6



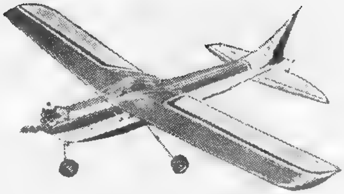


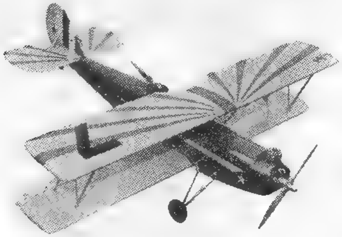
TAURI By Ed Kazmirski

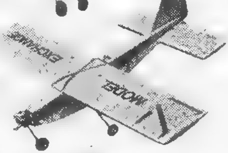
The perfect introduction to multi-channel radio control, by the foremost multi flyer. Simple construction, docile flying and moderate size are its best features. Ideal equipment is **a 3.5 c.c. engine and** six-channel radio control. Will **carry either** relay or relayless receivers. Span 57 inches.

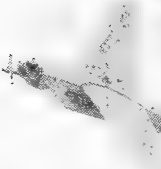
RC/857 **H, J.** ** ** **10/-**

Fine for learning multi









CLOWN By D. Stothers

A 49 in. wingspan multi channel biplane for sport flying. Aerobatic yet with simple strong construction.

RC/971 **K, N** * * * **15/-**

KI 46 TONY By H. Bando

Superb multi channel 68 in. span scale Jap fighter for 8-10 cc two sheet plan.

RC/931 **M, N.** * * * **17/6**

VICTA AIRTOURER 115 By G. Hahn

Super scale lightplane for multi channel R/C 8-10 c.c. 58in. span.

RC/922 **M, N.** * * * **12/6**

CITIZEN KROTE By D. Baxter

Small multi channel design for 2.5-5 cc 49in. span.

RC/929 **G, H, J** * * * **10/-**

GO-JET By L. Rudd

Fast rudder only R/C Sportster, very tough 29 in. for .5-1 cc.

RC/925 **B, C, D.** * * **5/-**

SMOKE TRAIL By C. A. Foss

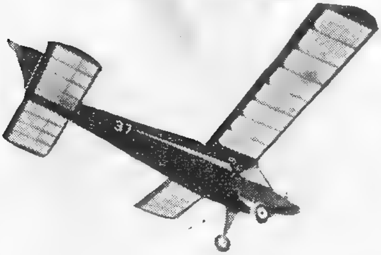
A 32 in. span "three-in-one" model for free flight, radio and ski equipped snow flying. Full instructions and ski details make this simple construction model ideal for the novice. Engines 0.5–0.8 c.c.

RC/PET 864 **C, D.** * * **3/6**

MIN KEMA By K. G. Humber

An 84 in. 4 channel R/C semi scale slope soarer, plywood fuselage sides and provision for elevator and rudder controls.

RC/870 * * **8/6**



QUEST By D. Boddington
36 in. aileron or rudder control R/C single channel .5-.8 cc.
RC/915 B, C. * * 5/-

WIFURSKIN By J. Bowmer
Semi-scale interceptor for 4-6 channel R/C & 2.5-3.5 cc, 55 in. span.
RC/914 G, H, K * * * 10/6

TYRO By D. Boddington
Perfect rudder-only R/C project for 1-2.5 cc, 45 in. span.
RC/920 D, E, F. * * 3/6

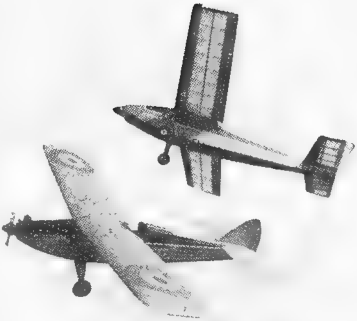
MISS FLIGHTY By J. Roberts
Unusual sports radio model of 40½ in. wingspan, mid wing, one-piece construction, tee tail.
RC/936 D, E. * * 4/6

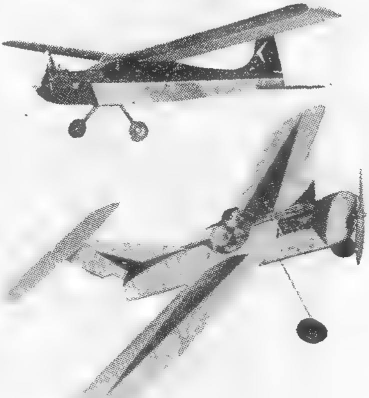
PYLIN IV
By D. Milburn and D. Townsend
A Single Channel R/C sports model of pleasing mid wing racing type design, with all sheet covering. 30 in. wingspan for .8cc engines.
RC/946 C * * 7/6

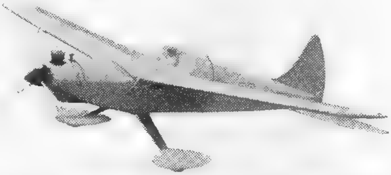
SANTA MARIA
By Vic Smeed and D. Boddington
Single channel R/C semi-scale model of 35 in. wingspan with all balsa fuselage. Plan features details of Mono Pack R/C equipment installation.
RC/963 C * 3/6

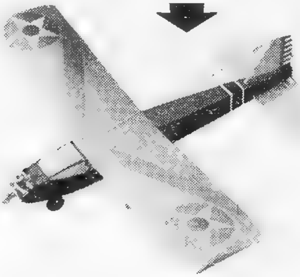
KAWASAKI TONY
By F. Arigaya
A near scale model of this sleek Japanese WW2 fighter for single channel R/C operation using combined aileron and rudder control. 40 in. wingspan.
RC/964 F * * * 10/-

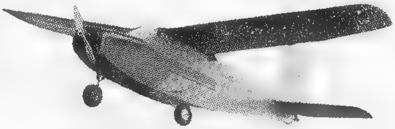
SLEEKER By P. Cook and M. Ashby
32 inch sports R/C model with good aerobatic performance. Features high wing and tricycle u/c.
RC/970 C * * 7/6

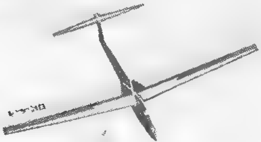


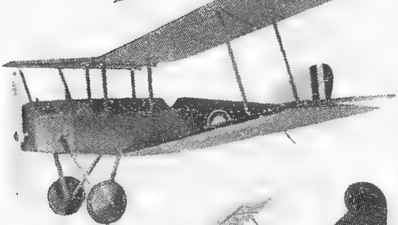


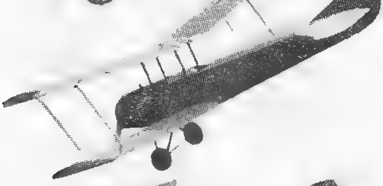


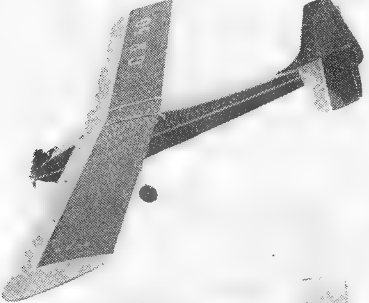


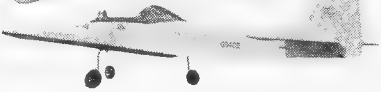












MOONBEAM

By J. Kay

A vee tailed slope soaring glider of simple design. 50 in. wingspan this model will take a variety of radio equipment, easy to build.

RC/938 * * 7/6

MINX

By R. Cizek

A three in one, glider, power or power assisted glider for F/F or R/C sport model from Czechoslovakia. 52 in. wingspan. Top recommendation for the Sunday flier.

RC/941 F, G. * * 10/-

TRIPLET

By T. Prukner

Basically a slope soarer, this model can be converted to a high thrustline powered soarer or waterplane. 39 in. wingspan of all sheet construction.

RC/952 A, B. * * 5/-

WARRIOR

By D. Boddington

Semi-scale British WW1 fighter, for Single Channel R/C. 42 in. wingspan this model has a very stable flight pattern.

RC/948 F * * 7/6

RED KNIGHT

By D. Boddington

A simple to build semi-scale model of a German WW1 fighter type of 42 in. wingspan, a perfect dog fight partner for "Warrior." For Single Channel R/C equipment. Another very stable model.

RC/949 F * * 7/6

GHOST RIDER 50

By D. Boddington

Aerobatic R/C model of 50 in. wingspan, which is specifically designed for Galloping Ghost control. Tricycle undercarriage and extremely simple construction.

RC/957 G * * 7/6

UPSET

By Chris Olsen

Latest of a series of full house multi channel designs by an expert in the class. 62 in. wingspan.

RC/967 M, N * * * 15/–

BAR-FLI

By Phil Kraft

World Champion's full house multichannel design of 58in. wingspan. Functional lines with an escape from stereotyped, bubble canopied models.

RC/950 M, N. * * * * 12/6

JAPP By T. Prukner

A miniature Single Channel R/C model, which despite its small size is fast and aerobatic. A great crowd pleaser for .010–.020 cu. in. engines.

RC/945 B, C. * * 3/6

See also . . . in the Flying Scale Power Section (P.12)

The following designs, which have been converted to Radio Control. In many cases, details are on plan Spitfire L XIV; Tiger Moth; SE52; Fokker D VII; Fieseler Storch; DH Gipsy Moth; Morane Parsol; Turbulent; Kirby Motor Tutor.

Licences

Just in case newcomers to Radio Control are not aware of it—you need a licence for operating remote control equipment. No tests, just fill in a form and pay £1 for five years' cover. Application form and full particulars from Radio Branch, Radio & Accommodation Dept., G.P.O. Headquarters, London, E.C.1.

'Build-it-yourself' leaflets. Supporting kits are also available from model shops and manufacturers

REMCON VERSATILE Rx & Tx

10 page leaflet on "second generation" development of the Remcon 12. Full size diagrams for printed circuit panels of Tx and Rx, all instructions.

RC/911 6/-

REMCON SUPERHET Rx

A 6 volt easily tuned all transistor superhet for 40–90 ohm reed bank on 1¾ in. x 2¾ in. printed circuit base.

RC/877 3/-

SIMPL-SIMUL TX By R. Boyer

Galloping Ghost pulse proportional transmitter specifically designed for easy construction by the average non-technical R/C enthusiasts. Critical components such as transistors chosen for availability, low price and manufacturer guaranteed limited coil and aerial and will operate with new popular G/G actuators such as Rund L R - 3 and controlaire Ghost Mk II.

RC/965 * * 7/6

SIMPLETONE TX AND RX

By R. Boyer

Simpletone Transmitter

Full transistorised single channel "tone" transmitter with constant carrier wave, fits into case size just 4½ x 4½ x 2 in.

Circuit is designed specifically for the non-electronic R/C enthusiast so that it can be set up without the use of complicated test equipment. Requires only a 6 v. bulb for tuning. Critical components such as transistors have been chosen for relative low price on quality.

Uses commercial aerial and coils. 12 v. operation.

(Also included)
Simpletone Receiver

Single channel super-regen. receiver designed to be easy to construct with wide component spacing. Relay and relayless versions shown for use with the Simpletone TX. 4.5-6 v. operation.

Also described is a relayless add-on switcher for galloping ghost actuators to provide a matching RX for the simple-simul TX. Switcher is capable of passing 2 amps, and is ideal for the Rund LR3 and controlaire ghost actuators.

RC/976 * * 7/6

GALLOPING GHOST
and pulse proportional data

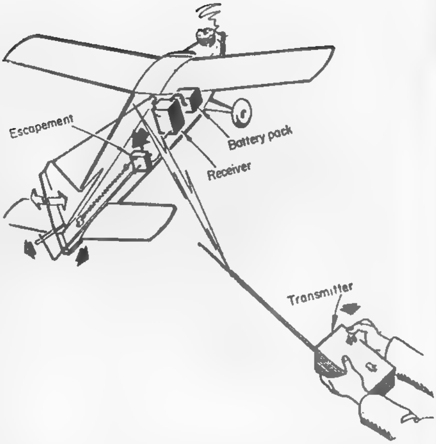
All published information on single channel proportional radio control summarised in special booklet to cover the fascinating subject. Includes topline U.S.A. and British expert advice with installation circuits for pulsed rudder. Galloping Ghost Rudder/Elevator with or without engine control and simple dual proportional. A reference book "must" for R/C fans.

Continued in previous column.

Although now old, and surpassed with arrival of new equipment, this is still compulsive reading.

RC/735 3/6

Radio Control Single Channel



THERE WAS A TIME when it was an embarrassment to recommend a reliable set of R/C equipment for the beginner, because there was no such thing. Radio was not only ultra-sensitive to tune, it rendered the operator super-sensitive. Nowadays, however, there are many reliable sets on the market and unerring radio is the rule rather than the exception.

Any expert will tell you that he started with single channel—this is the only way, so let us list the things required for that first R/C flight.

Firstly, one needs an easy-to-tune radio set. Transmitter should never need tuning once it has been tested at the factory and the average commercial receiver should be very simple to tune, with a wide band. That is to say, there should be a wide (1-2 turns) tolerance on the ferrite tuning coil slug; through which the Rx should have the necessary current rise to operate the relay or, if no relay, the escapement. But we will deal with this later.

Secondly, one needs a robust, smoothly functioning, rubber-driven escapement. This should operate on 3-4½ volts.

Thirdly, one needs a model. This should be a docile, stable flyer with robust construction. Pay particular attention to the choice of motor for the model, this should be flexible, with no tendency to excessive vibration. Ideally, a first model should be about 48 in.–54 in. span, with a 1.5 or 2.5 c.c. motor. This is large enough for R/C installation and not excessively expensive to construct.

When choosing radio gear, remember these points. A "tone" or "modulated" Rx needs only one tuning control, which is the tuning slug, and nowadays does not call for a meter to register current rise when tuning. On the other hand, the less expensive, but usually heavier "Carrier wave" sets have in addition a second sensitivity control.

Having bought your radio, wire up everything on the bench, with batteries and escapement hooked up to the receiver.

Switch on. When you press the button on the transmitter, the Tx will emit a signal which is picked up by the receiver at what is known technically as the "first stage." This signal is converted, and amplified by succeeding stages into an electrical current strong enough to induce the necessary magnetic field in the relay coil to "pull in" the relay armature (or escapement if a relay is not utilised). The relay is in fact a switch and its contacts are used to activate the escapement circuit. Nowadays the most common Receiver circuits use a miniature valve for the "first stage", followed by two, or in some cases three, transistor amplifying stages, the last stage switches the escapement direct. To tune the Rx to the Tx, switch on and hold the signal on. Dial the tuning slug using the correct non-metalic tool, first one way and then the other, until you hear the escapement "pull-in". You are now in rough tune. Again dial in both directions to determine where exactly the escapement "falls-out", and set the slug midway between these two points. You are now on tune. It is just the same as operating the tuning on a sound wave domestic receiver—all one has to do is to find the optimum for best reception. Repeat the process at a distance of 100 ft. to make sure of the range.

When you have built your model, transfer the radio from the bench and decide on the layout. A study of the typical layout illustrated will give an idea of what is required. The escapement can be mounted to a bulkhead. The Rx and batteries should be shock-mounted in foam rubber, with the heavier batteries in front of the Rx. Do not use foam plastic for mounting, it telescopes to nothing and has little in the way of protective qualities. Support all wiring well, remembering just one broken wire in flight can cause complete destruction of your equipment and model—shocking, isn't it? Take care and see that the wiring is 100 per cent. safe and sure.

Having completed the model and radio installation, you are ready for flying. Carefully trim the model to fly straight and level. Tune the Rx. If everything is working (and it should be!) you can start the motor and launch the model into wind with about two-thirds of full power.

Do not touch the Tx button until the model has gained sufficient altitude to manoeuvre without danger of hitting the ground—a lot of height can be lost in that first nervous turn. That's about all there is to it. The model is up there, the rest is up to you.

Multi-Channel Radio Control

THE PARTICULAR advantage of conventional multichannel systems is direct selection of a particular control service required. At the same time the system is inherently more complicated (electronically) and more expensive and demands the employment of motorised actuators or multi-servos. In general, such servos are of three basic types—

(i) Self-neutralising servos with 'bang-bang' action and controlled by two separate channels.

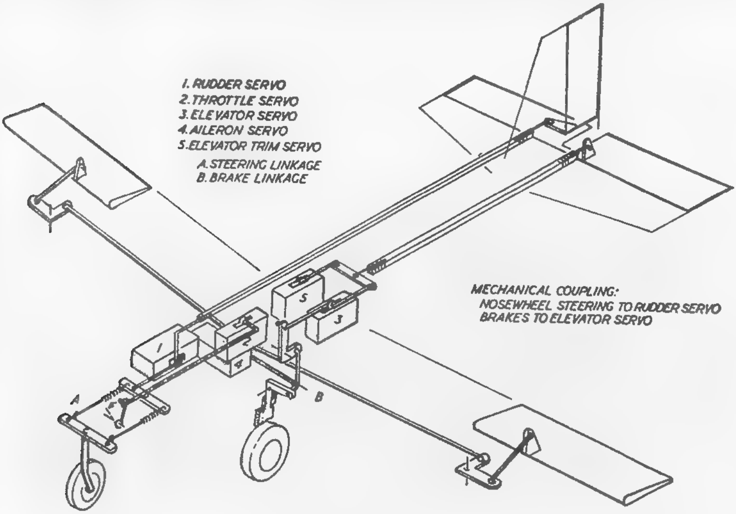
(ii) Progressive multi-servos which are 'inched' into position depending on the duration of signal. These are non-self-neutralising (in fact they have no neutral position) and again demand two separate signalling channels to drive in either direction.

(iii) Sequence switches (or motorised servos) which will respond to one channel and give either step-by-step sequence movements or progressive movement up to a limit, according to the duration of signal. In the latter case a spring return is normally necessary (although return to neutral can be provided by switchgear and a second battery with reverse polarity).

The majority of functions are performed by types (i) and (ii). In many cases the same servo can operate as either type, simply by change or connection. The main field of application of type (iii) servos is where a limited number of control channels is available and sequence switching on one channel can provide additional services on that one channel.

It should be noted that a single-channel actuator (servo or escapement) can also be operated by any single channel of a multi-channel receiver via a relay. This would appear to have distinct possibilities for multiple control operation via compound actuators using a minimum of channels—and thus minimum cost of equipment. Whilst this is preferable to the use of 'Cascaded' escapements with single-channel signaling and does overcome some of the 'time delay' trouble associated with this system, it is not generally satisfactory. Certainly it is inferior to true multi-channel operation in practice and a true multi system, even with limited control channels, can generally produce a superior performance. The principle use of single-channel actuators with multi-channel equipment is, in fact, virtually limited to engine speed control, giving a "changeover' throttle movement (self-neutralsing actuator) or three-position sequence throttle (four-position, non-neutralising actuator). This makes it possible to operate the throttle control off one channel only instead of two (as would be normal practice with a progressive multi-servo).

It is far more important, however, to cover all the main flying first in order to obtain complete control of the aircraft. This not only permits of adequate control



under all conditions but enables the design to be 'tailored' for maximum manoeuvrability. The main flying controls essential for complete control are—rudder, elevators, engine speed and ailerons, in that order. Elevator trim is another particularly useful control for flying smooth manoeuvres and for maintaining smooth inverted flight. Anything less than coverage of the four main control surfaces, independently selected, represents limitations to the system and thus to the performance that can be achieved in flight. To a certain extent some of these limitations can be offset by designing the model particularly for a certain set of controls, but this can only be done at the expense of loss of performance in other aspects.

Proportional Radio Control

PROPORTIONAL control means that the control surfaces of a model may be made to move a small or large amount, depending upon the position of a control stick on the transmitter. This method approaches full size practice more closely; in that where a wide turn is required, the control stick is moved just a fraction, the control surface takes up an equivalent position and may be varied proportionally throughout the maneouvre as the pilot makes the necessary corrections by the control stick.

With "bang bang" types of control previously described, one has to give short bursts of signal which have the effect of moving the control surface to a wider angle, but intermittently, so that the collective effect is to produce a wide turn. Unfortunately, it requires much skill and practice to do this without making the aircraft "jerk" and "twitch" in the flight pattern. Proportional control is more instinctive, but still requires a little prediction when flying. The pilot's response is inevitably slower, simply because he is not actually in the aircraft and cannot feel any change in the flight path "by the seat of his pants."

There are several ways of achieving proportional control ; we will not go into precise details as to the electronic methods used, but the smoothest systems will give an almost continuously variable movement of the servos, there being no " dithering " or vibration of the control surface. Such a system employs what are known as feed-back servos in that they are only switched on whenever there is a difference between the control stick position and the control surface position, such a system is quite economical on batteries, is usually commercially produced and generally beyond the skill of the average modeller to design and construct.

A simpler approach is to use ordinary spring centred servos such at Bellamatic or home built mechanism using Mighty Midget or TO 3 type motors. Control surfaces vibrate slightly all the time but it is possible for a modeller with a little ingenuity to make a complete mechanical system operated by relays or transistorised coding and decoding units, added to a standard single channel transmitter and receiver. Such systems are generally limited to proportional control of elevator and rudder and progresssive motor control (trimmable). Naturally, the controls require no trim servos, as trim is generally achieved by making appropriate adjustment to the code at the transmitter end.

Suppose we want to try something easier . . . our old friend " the Galloping Ghost " can be used ; like the system just described, it generally operates by pulsing the signal ' on ' and ' off ' rapidly . . . the relative time proportion ' on ' to ' off gives rudder control, the speed at which this is done is known as the pulse rate (pulses per second) control the elevator. The " G—G " system has a relatively low rate ; and a mechanical coupling between the elevator and rudder are driven from one geared motor such as a Mighty Midget. Both control surfaces flap violently and on earlier models used to make the model execute a flight path something between the twist and a bucking bronco . . . careful choice of model and control surface movement reduces this effect and the system represents the simplest way of obtaining simultaneous proportional control of two surfaces.

If you only need proportional rudder, the same system without pulse rate change can be used. A fairly high rate is selected in this case to avoid an uneven flight path. Sometimes a mechanical pulser can be made to switch the transmitter ' on ' or ' off ' and is thus suited to modellers who have no electronic skill. Small models can use a magnetic actuator or even a converted relay to move the rudder. One can use a relayless receiver if a spring is used to move the rudder to one side and the relay (or a Mighty Midget motor) pulls it to the other side. Some people have used an escapement in similar manner to the relay, removing the claw and fitting an extension to the armature.

The ultimate in simplicity is to use, the last mentioned system in the model and pulse the transmitter by hand. This is not really proportional in the true sense of the word, but as there is no " neutral and one pulse's with one's thumb two or three times a second, a proportional flight path can be achieved with small models. Suppose the model turns left under " no signal," one simply keeps applying opposite rudder by keying the transmitter until the flight path is straight. Longer pulses are then used to turn to the right. There is no chance of losing this type of model out of range ; it will just spiral down . . . a bent model is better than a lost one anyway !

How to Tissue Cover your Model

THE COVERING of a model aircraft used to be one of the trickiest parts of the construction; modern materials have largely simplified the process but it still does constitute a major stage in the production of a model and one which, especially in the case of beginners, offers something of a headache. Of the three main covering materials, tissue, silk, and nylon, by far the greatest use is made of the first. Probably 99 out of every 100 models are wholly or partly tissue covered, and there are six main types of tissue for the job.

Lightweight tissues, in order of weight, are (i) hard (or Swedish) tissue, (ii) Japanese tissue, (iii) Lightweight Modelspan. The first of these is a smooth, crackly paper which can be torn with equal strain in any direction and is available in a wide range of colours. It requires dampening (not soaking) with water after application in order to shrink it, and it shrinks evenly all over once only, i.e., a wrinkle cannot be removed by a second, local shrinkage. Only a small amount of dope is required for air-proofing, and a glossy finish is fairly easy to achieve.

Japanese tissue is nowadays only available on rare occasions: In a good range of colours, it can be distinguished by a visible stripe which runs in one direction through the sheet, and has a definite grain. It will tear fairly easily down the grain but only with reluctance across; in the same way it shrinks more across the grain than along it, so that for best results the grain should always run along the longest length of the area being covered. Shrinking and doping is as for hard tissue.

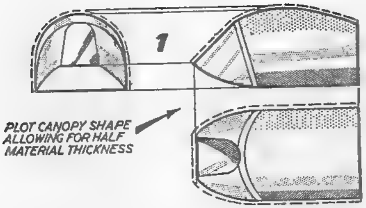
The first really specialised British covering paper, Modelspan, appeared in a limited range of colours soon after the war and is now extensively used throughout the world. Fibres running in all directions identify the paper, and it will tear (before doping) at any angle. Shrinkage is even in all directions, but local shrinking can be induced after initial shrink. So great is the potential contraction that water-spraying or steaming is entirely unnecessary, and the covering need only be doped to produce a smooth, wrinkle-free surface. Getting a gloss is not difficult.

The only medium weight tissue available is known as rag tissue, and is obtainable only in white' It looks alarmingly weak before doping, and is soft and nonrustling; its appearance is very much like paper handkerchiefs. Water-shrinking is definitely undesirable, but shrinkage is considerable and strength astonishing after doping.

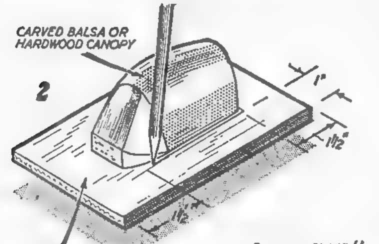
Two heavyweight tissues are obtainable, Burmese (white only) and heavyweight Modelspan, which can be had in five colours. Both these materials are tough, opaque papers, slightly rough to the touch when undoped. Water-shrinking is advisable before doping, and it is not really easy to obtain a high-gloss finish without adding a fair amount of weight.

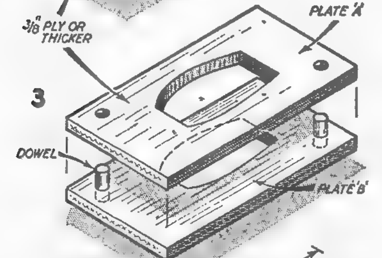
All of these tissues may be attached with the same adhesives and the technique of application is generally similar. The most popular adhesive is white photopaste, such as Gripfix or, in tube form, Tissue Paste. The limitation of this material is that it is soluble in water, and trouble can thus arise when a concave surface, e.g., wing underchamber) is water-shrunk; the paste is loosened by the water and the tissue pulls away as it shrinks. In such cases a waterproof adhesive is required, and Tissue Cement, a thinner, slightly slower setting cement than is used for balsa, caters for this. Many builders use this cement for all covering work. Gum or mucilage is also employed, while the use of thick clear dope is becoming more widespread, especially with the more porous papers. Flour paste is sometimes used, but tends to make the tissue soggy and locally weak.

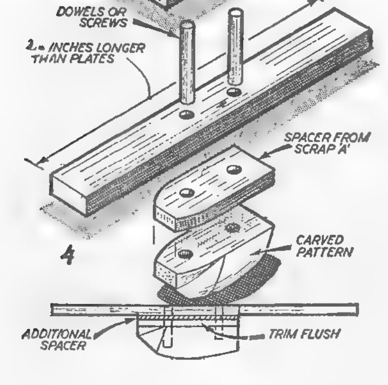
The secret of covering is to use as large a panel of tissue as can be attached without wrinkling, ending the panels where a definite break of contour appears (e.g., at dihedral breaks). Small pieces must be used for compound curves (e.g., round fuselage noses, etc.). Only the outer edge all round needs to be pasted, except where concave surfaces occur, when the covering must be stuck to each individual member (e.g., each rib on the underside of an undercambered wing). The procedure is : (i) Cut a panel of tissue to the shape of the part, allowing 1 in. extra all round. (ii) Apply paste (or cement) to the framework (edge only, except as above). (iii) Lay the tissue lightly in place, press the centre of one end down, and stretch along the length and press the centre of the other end down. (iv) Stretch the tissue to the full width at the centre of the sides and press down, then work from this point to each end, adjusting the tissue so that all wrinkles are worked out. (v) Trim off to within ⅛ in. of the edge and paste the edge down. Completely cover a frame before shrinking, and always cover all woodwork, even sheeting. If water-shrinking is to be used, spray the water on with a Flit gun or similar, and allow to dry naturally over a period of 24 hours. All tissue needs at least one coat of clear dope, except in the case of ultra-light frameworks, when banana oil is used to airproof the covering without shrinking it. Colour dope and fuel proofer should only be applied when the tissue pores are completely filled with clear dope.



Plastic Moulding







THE GENERAL method of moulding cockpit covers, etc., from transparent plastic sheet has been described many times in the past. The process of heating the sheet to a "plastic" state and then forcing over a suitable male pattern (or forcing the mould into the heated sheet) is capable of giving excellent results. Without the required "know-how", though a lot of time—and sheet plastic!—can be wasted following such general instructions. Hence we are describing this specific method of obtaining first-class mouldings which can be made at least equal in quality to commercial mouldings, and usually better.

Starting point, as in other methods, is to draw out a full size pattern of the shape required (1). This must be slightly undersize to allow for the thickness of the sheet material forming the moulding. On a typical canopy "draw", the thickness of the moulded part is usually half the original thickness of the plastic sheet—this thinning down being inevitable since the original sheet is expanded in area during moulding and since it does not change in volume, must lose **thickness.** Bear this in mind when deciding what thickness of canopy you want and start with sheet twice as thick.

The pattern can be carved from balsa or hardwood. The former material is quite suitable for drawing one or two off. Hardwood is better where a fair number of identical mouldings are required. This pattern need **not** be finished perfectly smooth and free from grain marks for ordinary mouldings.

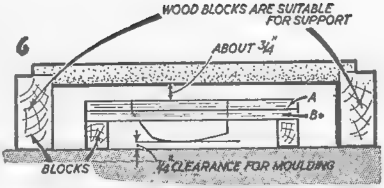
The next step is to cut two identical ply plates appreciably larger than the base of the pattern (2). Blate B, which becomes the bottom plate, is cut out to take the pattern with a clearance all round equal to the plastic sheet thickness. Plate A is cut out in similar fashion, but with a more generous clearance. The clearance on plate B is not critical provided a moulding "tight" to the bottom edge of pattern is not required, but it must be large enough not to jamb the sheet in the final moulding process. In other words, it can be oversize without giving trouble, other than an exaggerated "draft" on the bottom edge of the moulding. The two plates are conveniently located and locked together with a couple of dowels (3).

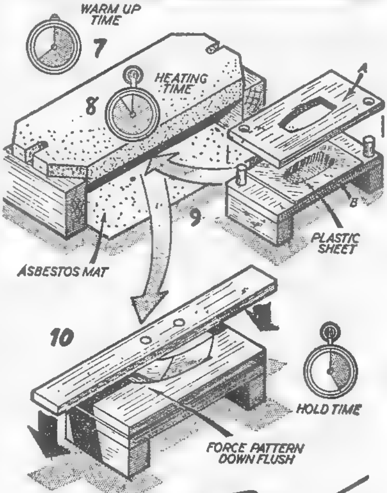
If the material is too rigid to form properly at stage (10), then most probably the heating time has been too short. Some improvement may result from preheating the pattern by laying on top of the heater. The same is true if the moulding tears. If the finished moulding has bubbles in it, or has a rough surface, then the plastic has been overheated. If the material looks overheated but is very difficult to mould (i.e. requires extreme pressure at stage (10)), then increase the clearance on plate B. If the bottom of the moulding (top when removed from the mould) has a rough or flattened surface, check that there is sufficient clearance between plate B and the table and that the moulding is not actually being forced into contact with the table surface.

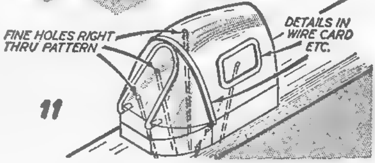
The other thing to remember is that the best mouldings will only result from using plastics **suitable for pressure moulding.** Not all plastic sheet moulds well, or gives satisfactory results. Celluloid, and standard acetate sheet, is not easy to mould in deep draws, as the heating time is quite critical. If overheated, it bubbles, if underheated it may draw, but will also go milky white in patches. So try to get acetate sheet, or similar, specified for pressure moulding. Perspex sheet will break or tear if underheated; or bubble if overheated. Flexible PVC is easy to mould, but tends to go cloudy (and, of course, gives a flexible moulding). Rigid PVC is an excellent material for opaque mouldings.

For really detailed mouldings, the same technique can be used with some reworking of the pattern (11). In this case the pattern **must** be finished perfectly smooth as every surface mark will show up. Details such as frames, etc., can be added by fitting wire, card, thin ply strips, etc. (11). Each panel area should then be ventilated by drilling with a very fine hole. In practice, it is easiest to drill a number of larger holes through the back of the pattern assembly and link up to these with the fine holes drilled through the actual pattern surface. The holes must be small as otherwise they will show up as small 'pips' on the final moulding.

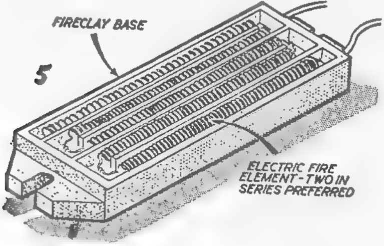
The pattern itself is increased in depth by the thickness of plate A (the cut-out piece from plate A can be trimmed down for this spacer). A balsa pattern is best assembled with hardwood dowels (4). With a hardwood pattern, woodscrews can be used for assembling on the pressure bar. The latter is any convenient size of hardwood strip some 2 to 3 inches longer than the plates so that it overlaps each end when the pattern is laid in the mould plates. If the final moulding has to be trimmed flush with the bottom edge of the pattern, another spacer (about 1/16 in. thick) should be fitted to give an extra depth of draw. This will eliminate the chance of getting a curled edge at the bottom of the trimmed moulding.


6
WOOD BLOCKS ARE SUITABLE FOR SUPPORT
ABOUT 3/4"
A
B+
BLOCKS
1/4" CLEARANCE FOR MOULDING





Various methods of heating the plastic sheet can be used but for consistent results **uniform** heating is essential. Hence a specially made heater is usually the best proposition, rather than using an electric fire or gas fire, cooker oven, etc. A proper heater also enables the moulding operation to be properly timed.



A suitable heater is easily made by fitting a standard electric fire element in a conventional ceramic mount (5). A single, continuous element rated for the mains voltage applicable will give strong heating but best results are usually obtained by joining **two** elements in series, so that the heater operates at dull red heat (or almost 'black'). This increases the heating time required but is virtually equivalent to infra-red heating, as used in industrial processes.

The heater can be supported, upside down, on wooden blocks (6) or on any suitable stand. Leads should be taken out well away from the front of the unit and completely insulated. The height of mounting is decided by first finding what height plate B has to be blocked up for the finished moulding to have about a ¼ in. clearance. Blocks can then be fitted to plate B to give this clearance, making sure that they are well clear of the cut-out portion. Then arrange the height of the heater so that the top of plate A is about ¾ in. below the level of the heating elements.

The complete moulding cycle is then shown in steps (7), (8), (9) and (10). First of all the heater must be switched on and sufficient time allowed for it to heat up to maximum, uniform temperature. With twin elements this may take up to twenty minutes.

The plastic sheet is cut to size and sandwiched between the two mould plates A and B (9). The sheet should overlap at least one inch all round the cut-out. Make sure, too, that the sheet is clean and free from scratch marks. When sure that the heater has reached constant temperature, slide the plates underneath and start a watch to check the heating time (8).

The heating time required will depend on both the type of plastic and its thickness. It is best determined by experiment with a few trial runs. The plate unit can be withdrawn at regular intervals and the state of the plastic observed. It is ready for moulding when it is showing definite signs of deformation or slight sagging, or is plastic enough to be pushed out of shape readily with a blunt piece of wood. As a rough guide, heating time required is usually of the order of 1 to 1½ minutes with 30/1,000 in plastic with 'dull' heating, and proportionately longer or shorter for thicker or thinner material, respectively.

How to Solder

MOST MODELS call for only the simplest of tools and can be built throughout with razor blade, glass-paper and pliers—until it comes to soldering. Even if it be only wheel retaining washers, most designs incorporate some metal-to-metal join which can only be made by solder.

The secret of soldering is cleanliness, and, for model work, the use of a flux such as "killed spirits" (Baker's fluid), in conjunction with tinman's solder. Cleanliness means filing, scraping, or abrading the metals to be joined until they are bright and free from grease, and also using a clean soldering bit. Essential, also, is an iron suitable for the job—it's no good trying to solder 10 g. wire with a 10 d. instrument iron !

Soldering doesn't just mean placing the two parts side by side and dropping a blob of molten metal over them. When the bit is really hot—so that the solder melts instantly on contact, but not so hot that it runs off—it should be damped with a little flux and a small amount of solder wiped on. The cleaned parts should then have a little flux applied and the iron used to tin them; this means that a thin coat of solder is run on to the surface with the iron. The parts can then be placed together, fluxed and the iron placed in contact, when its heat will fuse the two tinning coats together and leave a clean, sound joint. It will be obvious that to do this the parts being soldered must be a good fit together, and that the heat applied to tinning must be sufficient to form a good bond between the surface of the metal and the solder.

The function of the flux is rather complex, but, briefly, it is this. Solder "sticks" metal by melting into its surface, i.e. by forming a very thin skin of alloy between the metal and the body of the solder. The solder cannot fuse with the oxide of the metal, and the surface to be handled is always oxydised (a) by the action of the air (hence cleaning off thoroughly) and (b) by the heat from the iron. The flux is an agent which, broadly, enables the metal oxide to fuse with the solder, rather in the same way as soap enables a certain mixing of grease and water to take place. Understanding this simple principle is a big aid to sound soldering.

When binding a joint, thin copper wire or 15 amp. fuse wire should be used, and this also should be cleaned thoroughly. The parts to be joined should be tinned before assembly, then bound and heated. To form a fillet of solder, the iron should be held beneath the work and the solder stick applied on top. To localise heat, lay the work on heavy metal blocks, but don't attempt to solder actually over a block, as too much heat is conducted away. Use a wooden support at the point of working. Heat shunts, to prevent heat travelling to another previously soldered part, or damaging a delicate radio part, can be metal clips, wet rag wrapped round, blocks of metal clamped on, etc.—anything that will absorb heat and prevent it from travelling. Always clean a joint thoroughly after using a flux as mentioned above, and do not use this type of flux for electrical joints; these should be made with Fluxite or other non-corrosive flux. For long joins cover a little anhydrous zinc chloride with methylated spirit and paint on. The meths. will evaporate to leave an even coat of zinc chloride. Do not use anything but methylated spirits with this chemical.

Doping and Finishing

MANY OTHERWISE excellent models are ruined by a poorly-doped covering job,and some even refuse to fly because of over-enthusiastic application, especially of colour. The normal covering materials require, as a rule, no more than three coats of thinned clear dope and nothing further. In many cases two coats are sufficient, and when hard or even Japanese tissue is used, one coat is frequently enough.

Dope has two main functions, increasing the efficiency of the model and adding to its aesthetic appeal. Clear dope adequately fulfils the first of these, which may be subdivided into, in order of importance, (i) air-proofing, (ii) strengthening, and (iii) tightening the tissue. Note that the shrinking effect of dope is least important.

Air-proofing of the covering is essential for good performance and the application of dope accomplishes this by depositing over the pores and fibres of the material a thin skin of cellulose, rather on the lines of a celluloid film laid over the orginal covering. This film prevents air passing through the material, slightly increasing lift but decreasing drag to an astonishing extent.

Colour dopes are used purely to improve a model's appearance and should be used very sparingly. A coloured model is visible further away, both in the air and on the ground, if the right colours are chosen. A model embodying large areas of colour should use coloured tissue, which is considerably lighter than a doped finish but requires a fraction more care in application. Red, yellow, and orange are the best for visibility, and flying surfaces of this colour with a darker (black, blue, etc.) fuselage are normal practice. Coloured tissues thus improve efficiency. Coloured dopes are pigmented and thus increase weight tremendously, besides tending to make tissue a little brittle. When used, three thin coats are much better than one "treacly" one, and it is advisable to limit the application of colour to a little decoration, or to the fuselage only. To give depth of colour, it pays to use the nearest-coloured tissue for the covering which is to be doped.

Alternative (and lighter) means of colour-trimming are to cut the trim shapes from coloured tissue and dope them in position, or to use transfer sheets. Banana oil may be used to protect transfers, etc., and also to give a general gloss to a model, although, again, weight increase is very marked. Fuel-proofer also carries its weight penalty, but is advisable (with glow-plug engines essential) especially around the nose.

Good, soft brushes and a bottle of thinners are essentials for a good finish—a few coppers saved here may ruin an otherwise first-class model. Dope should be flowed on fairly thin, and the brush passed over the surface only once. Allow each coat to dry thoroughly before further applications. When no "pin-holes" or pores can be seen on the tissue surface no further dope is needed.

A concours finish is usually obtained by (i) tissue covering, (ii) clear doping one coat, (iii) applying up to four coats of sanding sealer and rubbing down with the finest flour paper, (iv) applying up to seven coats of thin colour, rubbing down every other coat, (v) rubbing down with metal polish and finally applying a coat of car polish. A sprayed finish offers no real advantage over brushwork when this technique is followed. Trimming is done with ruling pen, compasses and fine brushes, making use of masks. Cellophane tape is excellent for masking; make sure the edge is pressed really well down by running the thumbnail along it. (Some experts even go so far as to clear-dope the edge to prevent colour from creeping.)

International Model Requirements

THE FEDERATION Aeronautique Internationale (F.A.I.) is the international governing body for control of model flying and issues certain specifications to which all models entering international contests or claiming World Records must comply. These specifications are detailed in the F.A.I. Sporting Code, Section 4, Aeromodels.

Wing Area (Total projected area of the horizontal or oblique Wing and Tail surfaces) must be less than, or equal to, 150 dm² (16.142 sq. ft.).

Weight.—The total weight in flying trim must not exceed 5 kgs. (11.023 lbs.).

Loading.—The loading on the supporting surfaces, as defined above must be between . . . 3.93 oz., per sq. ft. and . . . 16.38 oz. per sq. ft., except for control-line models, the maximum being 32.76 oz. per sq. ft. and Radio Control models, the maximum being 24.51 oz., per sq. ft.

Motive Power Permitted.—Rubber Mechanical engine or direct Reaction. In the latter case the weight of the engine should not exceed 0.5 kg. (17.63 ozs.) and the total weight of the model including fuel, 1 kg. (35.27 ozs.).

How to cover with Silk

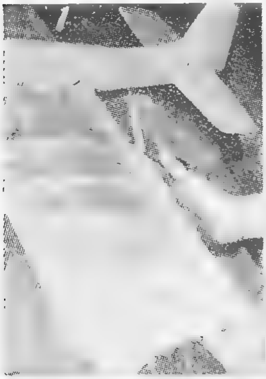
THERE IS no other form of model covering that approaches the strength/weight ratio of silk or nylon, yet very few modellers appear to take advantage of this fact. First thoughts must certainly be for economy in use, and the raw silk is placed over the area to be covered, then trimmed to shape with a pair of sharp scissors, as in picture **1.** The overlap allowance need only be a matter of ⅜ in. all round, since when applied wet, the silk will be pulled larger than when dry.

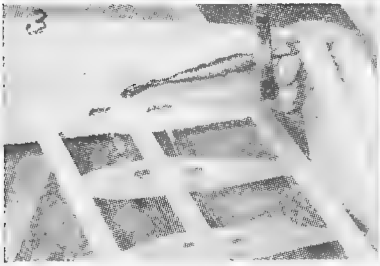
Next, take the silk to a tap and get it thoroughly wet **2.** Then squeeze (do not wring out) the excess moisture by compressing in the palm of your hand, and then spread the dampened silk out flat and hang over a chair-back.

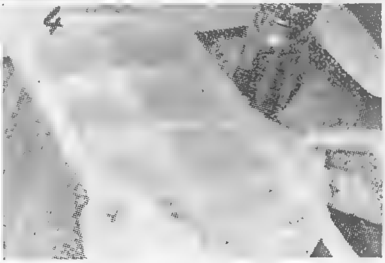
In **3** we are using our favourite pickle jar brush preserver, wherein the brush is permanently mounted in a Bakelite jar top, and the bristles always dope filled in the contents of the jar which are replenished from the less convenient tins sold in the model shop. We have now made the framework thoroughly gooey—and flop—on goes the root end of the covering as in **4.** Support the rest of the damp silk off the frame, then apply, panel by panel, pulling more spanwise than chordwise. When a couple of rib bay panels are done, pin the silk at the root to stop it slipping, and when the last wrapping around the tip is to be made, pull hard spanwise to remove any sag. This will give spanwise wrinkles which are soon removed by working the silk over leading and trailing edges. Application of extra dope here and there, enables one to move the silk quite easily while it is still water-damp.

Final effect is soon observed as in **5,** and any white "blushing" soon disappears when the first heavy coat of shrinking dope is applied to fill the pores. Thereafter, use two or more extra coats of clear dope, as for a tissue covered model.

The frayed edges left when trimming down to final size are easily glass-papered off after the first coat of dope. Successive coats of clear dope should be applied until no pin holes appear in the covering, when colour dope may be applied and rubbed down as detailed above. Silk or nylon, applied properly, are virtually crash-proof.







Take care of your Plans

WITH OUR Plans Service continuing to expand there must always be new builders taking advantage of our wide range, many of whom may not have worked from a plan before and who may therefore be unaware of the odd hints which make the work much easier. These notes are written for such modellers, but old hands may find them useful.

General Use

Most builders like to preserve their plans, and since many parts are actually built over the drawing there is always the danger that the cement used will run and stick the plan to the framework. Even if a modeller doesn't mind his plan getting into a mess, the bits of paper have to be sanded off the model, so that it is a good idea to prevent this adhesion if possible. Covering the part of the plan in use with waxed paper or polythene is one method; alternatively, the drawing can be rubbed with a stump of candle or a piece of soap wherever a joint occurs. Either system means that the completed framework can be lifted off cleanly and easily. A separate board for cutting out parts is also useful; it need only be a small sheet of ply and it will save the plan from being cut.

Tracing

There are several ways of transferring drawn-out parts to the wood from which they must be cut. These are (i) lay tracing paper over the plan and carefully trace the outline with a soft pencil, ensuring that the plan is lying on a smooth, hard surface. Turn the tracing paper over on to the wood and go over the lines from the back which will transfer the original tracing. (ii) Clip carbon paper under the plan and align the material by feel; go over the drawing very carefully with a hard pencil. (iii) Place the wood under the plan and pin-prick carefully round the outline, remove the plan and connect up the marks in the wood with a hard pencil. (iv) If you do not require the plan to be kept in good condition, cut out the drawn parts and paste them direct on the wood. This is not recommended for components longer than 12 inches since distortion occurs during paste-down. When several identical pieces are required (e.g., wing ribs), paste make a template. Time can be saved by numbering or identifying parts as cut. the cutting on thin ply or aluminium to

How to start a Model Club

There are two ways of starting a Club, and you should give careful consideration to the way you think will prove the best in consultation with your friends.

One way is to arrange a public meeting, and through the local newspaper and by letter, invite anyone to attend who is interested in the formation of a Model Aircraft Club.

If it is decided to adopt this plan it would be advisable to secure a wellknown citizen to act as chairman of the meeting, and to secure an able speaker to talk about the value of the hobby as a splendid way of occupying leisure. The SMAE should be approached if you find any difficulty in securing a speaker able to talk authoritatively on the subject.

After the speech, and time devoted to open discussion the Chairman should propose that a Model Aircraft Club be formed, and he should put the motion to the vote of those attending the meeting. If it is carried, as doubtless it would be, a provisional committee should at once be formed to go into ways and means.

The second way is much simpler, and leads to the same end. The originators of the idea to form a club should decide to regard themselves as the provisional committee, and leave the public announcement of the venture until a later date when headquarters have been found, and the Club formed.

Whichever way is adopted, the first step for the newly-formed Committee is to elect the following officers:

- (a) A Secretary and Treasurer (the two offices can be combined in the early stages)
- (b) A Chairman (preferably a senior)
- (c) A Press Secretary
- (d) A Competition Secretary.

JOIN THE S.M.A.E. NOW

It is run by aeromodellers, for aeromodellers. It negotiates for flying sites, organises contests, publishes a newsletter, provides £50,000 third party insurance for members and protects your model control frequencies. For full details and the address of your nearest club, send an S.A.E. to: **Society of Model Aeronautical Engineers, 10a Electric Avenue, London, S.W.9.**

Balsa Wood and how to use it

BALSA (or balsawood, whichever you prefer to call it), has been the standard material for model airframe construction since it first became available commercially in suitable cut sizes—some thirty-five years ago in this country and even earlier in America. Although, botanically at least, balsa is only about the fourth or fifth lightest wood in the world it is the first of all the woods which combine **strength** with lightness. On a strength/weight basis, in fact, balsa compares favourably with most other woods—even oak. This is one of the main reasons why it is so suitable for aeromodelling, where strength is required with minimum weight. Many other materials which are as light as, or lighter than balsa, also fall down on this question of combining strength with lightness and cannot be used in small sections — expanded polystyrene, for example.

The other great advantage of balsa is the ease with which it can be cut or carved, and jointed with quick-drying cement. Having a fairly open structure, balsa readily available in a wide range of strongly to balsa with the result that properly made glued joints are as strong or stronger than the wood itself. With balsa cement impregnates and adheres sheet, strip and block sizes, very few tools are required for working balsa, either in solid form or for the assembly of built-up frames, etc.

At the same time, however, there are disadvantages. The balsa tree is very fast growing, reaching a height of 15 feet or more within a year and growing to between 60 and 90 feet within the next six to ten years. After that time the tree begins to deteriorate and rot. As a result both the density and quality of the lumber obtained by felling balsa trees can vary enormously.

The actual density of balsa can vary from as little as 4 lb./cu. ft. to as much as 24 lb./cu. ft. (which is about the same as obeche). Practically all the commercial balsa available, however, falls within the range of 6 to 16 lb./cu. ft. with the overall average tending to run about 9-10 lb./cu. ft. The strength properties of balsa vary directly with density—the heavier the wood the stronger it is.

Balsa is normally graded by density, although the actual descriptions are largely arbitrary and not alway identical between different suppliers, or different model dedesigners specifying grades to be used. The most general commercial classification is "light," "medium" and "hard," as under—

grade	light or soft	medium	hard
density lb./cu. ft.	6-8	9-12	12-16

The more expert modellers adopt a wider range of grading, typically as shown below—

grade	ultra-light	light	light medium	medium	medium hard	hard	extra hard
density lb./cu. ft.	6 or under	6-8	8-9	9-10	10-12	14	16

Logically one selects the lightest grades for the lightly stressed parts (e.g. block wing tips, sheet fill-in, etc.) and the heavier grades for spars and longerons. Even here, however, practice can differ. Some modellers prefer to use very hard balsa for longerons and spars and keep weight to a minimum by reducing the actual size of the sections used. Others prefer to use a lighter grade and compensate for strength by using a larger section.

Both systems have their advantages and disadvantages. The use of hard grades and small sections actually gives the best overall strength to weight ratio **(see Table 1).**

TABLE 1. STRENGTH/WEIGHT FIGURES FOR VARIOUS WOODS

wood	stiffness	bending	compression
Balsa 8lb. Density	90	78	84
10lb. Density	100	100	100
14lb. Density	112	115	136
Spruce	82	93	103
Basswood	100	111	111
White Pine	87	101	113
Douglas Fir	80	97	114
Oak	62	90	6

Note: The strength/weight ratio of 10 lb. cu. ft. Balsa is rated at 100 and the strength/weight ratios of other woods calculated accordingly. Thus a figure of less than 100 shows a performance inferior to 10 lb. balsa on a strength/weight basis; and a figure of over 100 a superior performance.

On the other hand, the smaller size spars may be more difficult to handle for building and also lack local stiffness. Using larger sizes normally gives greater stiffness and local strength, although it is also easy to add excess weight as well unless the grade is carefully selected. Also if too light a stock is chosen in the interests of saving weight, the resulting structure may be weak. For most purposes, however, **Table II** can be used as a guide for balsa grade selection.

In practice, grade selection can only be made with reference to actual weights of individual sheets or strip lengths.

A tip to remember here is that as far as grading is concerned, suppliers of cut balsa tend to favour selection of the harder grades for the smaller sizes (or thickness) of strip and sheet as being easier to handle. Thus one is more likely to find mostly "hard" grade in 1/16 in. sq. for example, and more medium to soft in ⅜ in. sq. Similarly, the proportion of "soft" is likely to be higher in ⅜ in. and ¼ in. sheet than in 1/32 in. or 1/16 in. sheet.

In point of fact "cut" is more important than appearance in the case of sheet stock since this largely controls the rigidity, or strength of the sheet. And cut depends on the way the original lumber is cut from the log and then finally machined. If the "cut" is such that the annular rings effectively run **across** the thickness of the sheet (tangent cut) the sheet will be fairly flexible, edge to edge. If, on the other hand, the cut is such that the annular rings run across the thickness of the sheet (radial or quarter-grain sawn), the sheet will be rigid. It will also be appreciated that a piece of lumber cut from either section **A** or section **B** of the log can have a **final** cut for turning into sheet which is **either "tangent"** or **"quarter-grain,"** depending on which face the cut is made from. If the section of lumber is "random cut" the grain direction is less clearly defined and irrespective of the direction of final cut the sheets will have intermediate properties between "tangent cut" and "quarter-grain."

TABLE II. RECOMMENDED APPLICATIONS OF BALSA GRADES

Grade	Application(s)
ULTRA-LIGHT	Indoor free flight model airframes Indoor hand-launched gliders (all sheet) Solid (block) wing tips (all free flight models)
LIGHT	Sheet fill-in on built-up fuselages Semi-solid or hollow log fuselages (control line and radio control) Sheet covering (fuselages and wings) Wing leading edge sheeting Folding propeller blades All-sheet wings Cowling blocks
LIGHT-MEDIUM	Sheet fill-in on larger models Large section leading and trailing edges All-sheet tail surfaces Solid sheet wings (gliders) Sheet-box construction (e.g. fuselages)
MEDIUM	Spacers on box fuselages stringers on streamlined fuselages Trailing edges Solid sheet wings (control line models) Longerons of generous section
MEDIUM-HARD	Wing spars of generous section Auxiliary wing spars Longerons Small section trailing edges Carved (freewheeling type) propellers
HARD	Main wing spars Longerons of small section Auxiliary spars of very small section
EXTRA-HARD	Inset leading edges on side sheet wings Wing mainspars of small section Building jigs

It is difficult to distinguish between random cut and tangent cut by appearance, or even by simple bending tests, but quarter-grain shows up quite clearly by the speckled appearance of the surface. True quarter-grain sheet, in fact, would be too stiff to bend to even moderate curvatures without splitting — and quite impossible to roll into a tube shape as can be done with carefully selected light density tangent cut stock.

The stiffness or otherwise of spars is best judged by actual test—e.g. to obtain a pair of matched spars select two of equal weight and appearance. In this manner, and in the latter case in particular this may mean examining and testing a considerable number of individual strip lengths in order to arrive at a set of four more or less identical pieces. Many experienced modellers, in fact, prefer to cut longerons and spars from **sheet** stock in

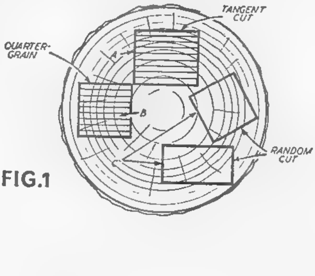
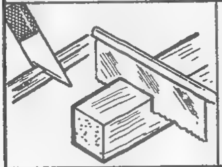
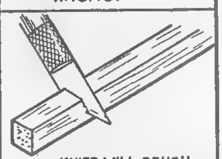
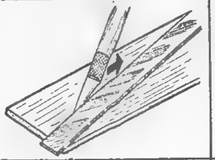
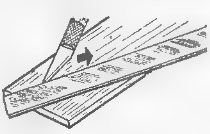
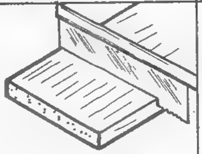
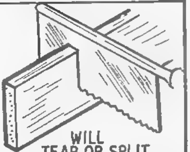
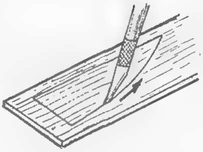
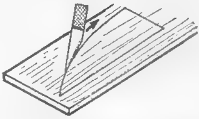
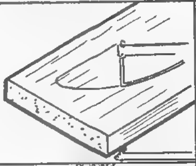
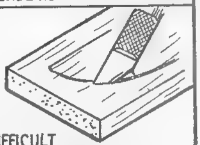
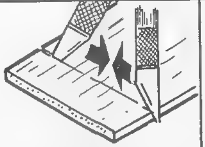
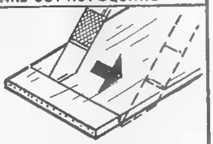
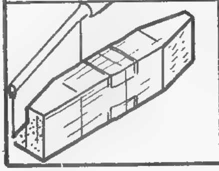
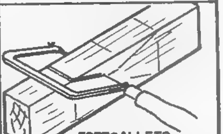


FIG.1

RIGHT!	TYPE OF CUTTING	WRONG!
	PARTING OFF CUTS - USE REALLY SHARP KNIFE OR RAZOR SAW FOR ALL LARGER SECTIONS	
	STRAIGHT CUTS WITH THE GRAIN - USE METAL RULE AS GUIDE - CUT IN DIRECTION THAT GRAIN PULLS BLADE AGAINST STRAIGHTEDGE	 BLADE WILL RUN OFF LINE
	STRAIGHT CUTS IN THICK SHEET - USE SAW WHERE POSSIBLE AND ALWAYS FOR EDGE TO EDGE CUTS ACROSS GRAIN	
	FREEHAND CURVES - CUT IN DIRECTION WHERE GRAIN WILL PULL BLADE AWAY FROM SHAPE. CLEAN UP LATER AS NECESSARY	
	FOR CURVE CUTS IN THICKER SHEET USE FRETSAW OR COPING SAW AND FINISH TO FINAL TRUE OUTLINE WITH SANDPAPER	 DIFFICULT AND CUT NOT SQUARE
	CROSS GRAIN KNIFE CUTS - ALWAYS CUT FROM EDGE TO CENTRE NEVER OUTWARDS TO AN EDGE	
	FOR CUTTING BLANKS - USE A STIFF BACK SAW AS FAR AS POSSIBLE	 FRETSAW ETC WILL NOT CUT SQUARE

order to achieve complete matching. In general, however, this is only advantageous where relatively small sizes are involved—e.g. longerons not greater than 5/32 in. sq. section and spars not more than ⅛ in. thick. Cut longerons and spars in thicker sheet generally suffer from inaccuracies due to the difficulty of making long accurate "square" cuts in thicker sheets.

In cutting a set of matched longerons, the sheet should be marked before cutting (e.g. with a ball pen) so that the final lengths are identified end for end and used the same way round for a complete match.

A modelling blade with a fine taper is usually best for cutting thin sheet. The same blade may also be used for parting off longeron and spacer sections up to ⅛ in. square; although some modellers find it easier to work with a less tapered blade.

The main thing is to avoid stressing balsa sheet across the grain (in which direction it is weakest), so cross grain cuts should always be made from the edge inwards, rather than outwards towards an edge. Also, when cutting at an acute angle to the grain, make the direction of cut so that the grain will tend to pull the blade away from rather than into the component shape.

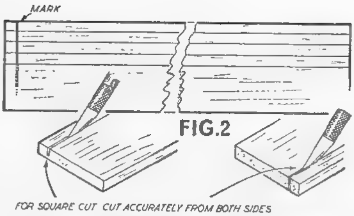


FIG.2

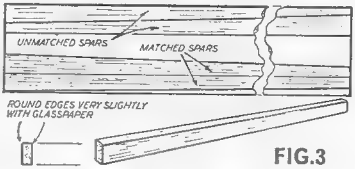


FIG.3

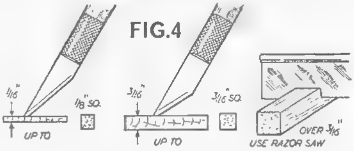


FIG.4

Handling Rubber Motors

TABLE I. WEIGHT OF RUBBER STRIP (Unlubricated)

Size	Yards per lb. weight	Weight in ounces			
		1 foot	1 yard	10 feet	12 yards
⅛in. x 1/30in.	190	.028	1/12	.28	1
⅛in. x 1/24in.	135	.035	1/10	.347	1¼
3/16in. x 1/30in.	130	.042	⅛	.42	1½
3/16in. x 1/24in.	100	.052	5/32	52	1⅞
¼in. x 1/30in.	96	.056	1/6	.556	2
¼in. x 1/24in.	75	.070	1/5	.695	2½

TABLE II. MAXIMUM SAFE TURNS PER INCH MOTOR LENGTH (Lubricated)

Rubber Size	NUMBER OF STRANDS								
	8	10	12	14	16	18	20	22	24
¼in. x 1/24in.	30	26	24	22	20	—	—	—	—
¼in. x 1/30in.	33	30	28	26	25	24	—	—	—
3/16in. x 1/24in.	35	32	29	27	26	24	23	21	—
3/16in. x 1/30in.	37	34	31	29	28	27	26	25	24
⅛in. x 1/24in.	44	40	36	33	31	30	29	28	26

Model	Wing Span	Wing Chord	Area in²	T/P Span	T/P Chord	Area in²	Moment Length as measured between ¼ chords	Formulated Answer $\text{C.G.} = \frac{\text{Chord}}{7} + \frac{3\text{xT/P Area x Momnt}}{8 \text{ x Wing Area}}$	C.G. as measured on plan
Miles Student Free Flight Scale	22''	4.2''	92.4 in²	9.5''	2.95'' mean	28 in²	12.3''	$= \frac{4.2}{7} + \frac{3 \times 28 \times 12.3}{8 \times 92.4}$ $= .6 + 1.45$ $= 2.05''$ behind L.E.	1.97''
Timber S/C R/C	37½''	7¼''	272 in²	16½''	4'' mean	66 in²	18.8''	$= \frac{7.25}{7} + \frac{3 \times 66 \times 18.8}{8 \times 272}$ $= 2.755''$	2.70''
Comet 88 C/L Scale	29¼''	3.35'' mean	98 in²	8.1''	2.1'' mean	17 in²	11.1''	$= \frac{3.35}{7} + \frac{3 \times 17 \times 11.1}{8 \times 98}$ $= 1.2$ from L.E. at mean chord	1.15''
Pluto Glider	45.5''	4.75''	215 in²	17''	3''	51 in²	19.25''	$= \frac{4.75}{7} + \frac{3 \times 51 \times 19.25}{8 \times 215}$ $= .68 + 1.74$ $= 2.42''$	2.48''
Rascal C/L Stunt	26''	5.5'' mean	143 in²	12''	2.44''	29.2 in²	9.5''	$= \frac{5.5}{7} + \frac{3 \times 29.2 \times 9.5}{8 \times 143}$ $= 1.5$	giving slightly less sensitive elevator 1.3''
Woodford Special (Glider)	55.5''	5''	278 in²	20''	4''	80 in²	22.8''	$= \frac{5}{7} + \frac{3 \times 80 \times 22.8}{8 \times 278}$ $= .714 + 2.46 = 3.175''$	3.3''
Stomper Comp F/F	48''	7.0''	330 in²	26.5''	5''	130 in²	27.5''	$= \frac{8.25}{7} + \frac{3 \times 130 \times 27.5}{8 \times 330} = 1 + 4.05$ $= 5.05''$	4.9''
Gasser Comp R/C	40''	10''	400 in²	16.8''	5.4''	91 in²	21.6''	$= \frac{10}{7} + \frac{3 \times 91 \times 21.6}{8 \times 400} = 3.27''$	Not shewn on plan

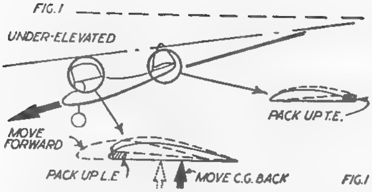


FIG. 1

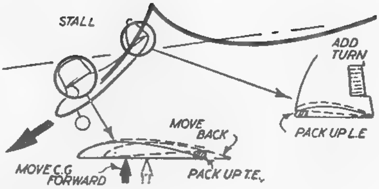


FIG. 1

How to Trim Free Flight Models

All models will require a certain amount of individual adjustment, and for early success it is important that we go about this in a particular order.

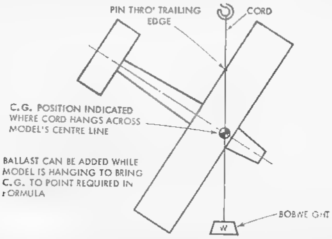
STAGE 1

Failing information about the balance point (C.G. location) marked ▲ or ● on the plan, the position can safely be worked out by the following simple formula :—

$$\textbf{C.G. Distance in Inches Measured from the Wing Leading Edge} = \frac{\textbf{Wing Chord (Ins)}}{\textbf{7}} + \frac{\textbf{3 x Tailplane Area x Moment Lgth.}}{\textbf{8 x Wing Area}}$$

Moment length = Length between ¼ chord of wing and ¼ chord of tailplane.

Ensure that the C.G. comes at the point given in the formula, either by adding a small amount of ballast or by shifting some internal object such as batteries in the case of an R/C model. In all models we can take the C.G. more forward of the point indicated in the formula, and this is often done with the control line trainer in order to make the elevator control less sensitive. There is little advantage in doing this on F/F or R/C models. On no account must the C.G. be taken much further aft than this point. An accurate check on C.G. position can be made by suspending the model by one wing as shown.


PIN THRO' TRAILING EDGE
CORD
C.G. POSITION INDICATED WHERE CORD HANGS ACROSS MODEL'S CENTRE LINE
BALLAST CAN BE ADDED WHILE MODEL IS HANGING TO BRING C.G. TO POINT REQUIRED IN FORMULA
BOBWEIGHT
W

STAGE 2

Changes in setting the wing and tailplane angle (trim changes) basically cause changes in flying speed. The model's flying speed should be chosen, not only to suit the class of model, but also to fit in with the wing loading. The greater the wing loading, the greater the flying speed.

As a rough guide to speed the following table should be useful :

WING LOADING (Total weight divided by wing area)	TYPICAL SLOWEST FLYING OR GLIDING SPEED	
	Span 3ft. or less	Span 3ft. 6in. or over
4 oz. per square foot	15 m.p.h.	12 m.p.h.
8 oz. „	18 „	14½ „
10 oz. „	19½ „	16 „
12 oz. „	21 „	17½ „
16 oz. „	24 „	20 „
20 oz. „	27 „	22½ „

In practice the model must be made to fly slightly faster than these speeds.

Choose a calm day for initial flights and test glide over grass. Launch the model as steadily as possible **slightly downwards** at a speed somewhat faster than that given in the table. If the model dives, increase the wing incidence or reduce the tailplane incidence by packing. If the model 'zooms' up and stalls, try launching a little slower. If it still appears to stall, reduce the wing incidence or increase the T/P incidence. See diagram.

Make all test changes in small amounts and observe results carefully and learn! Do not try to fly the model slower than the above speeds, it won't. On **no account** shift the C.G. position more than a small amount aft of that calculated in Stage 1.

STAGE 3—FOR POWER MODELS

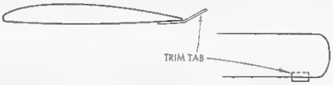
For first power flight use just enough fuel to get the model airborne 30-50 ft. (10-15 seconds) for sports F/F or 50-100 ft. (20-30 seconds) for single channel R/C. It is only from this height that one can judge the glide properly. Do not be too mean on the power. A model that just hovers at launch height can be a danger to many. Remember that low engine revs. don't mean a low flying speed, but rather a low rate of climb.

FOR GLIDERS

For the greatest endurance the wing and T/P incidences will not be set for the slowest speed (where the model is just below the stalling point) unless there are terminals about. This set up, in spite of slow forward speed, will result in a high rate of sink due to a poor gliding angle. A slightly faster trim should be adopted, i.e. less wing incidence or slightly more T/P incidence, where the gliding angle will be appreciably better.

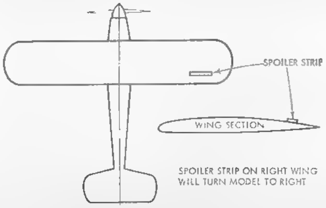
Causing the model to turn, either by (i) a little rudder deflection or, (ii) a small aileron type trim tab can easily aid endurance and troubles caused by over elevation.

Make the aileron type trim tab of the upturned variety on the wing we need to drop rather than a downturn tab on the rising wing, i.e. to induce a left turn place upturned tab on trailing edge of left wing and not a downturned tab on the right wing.



A piece of thin aluminium or thin stiff card attached with Evo-stick can often make an excellent trim tab.

Another method of trimming a turn on the model and an alternative to the other two is to use a spoiler. The spoiler can take the form of a piece of ⅛ inch square strip situated on the upper surface of the wing between mid-chord and threequarter-chord position.



The spoiler not only yaws the model slightly due to increased drag on that particular wing, but also destroys some of the lift of that wing. This causes the model to bank and so turn smoothly. This third method for adjusting a turn is perhaps one of the easiest.

As an example: a spoiler 3 in. long and ⅛ in. square is sufficient to cause quite a steady turn on the average 5 ft. span model.

STAGE 4

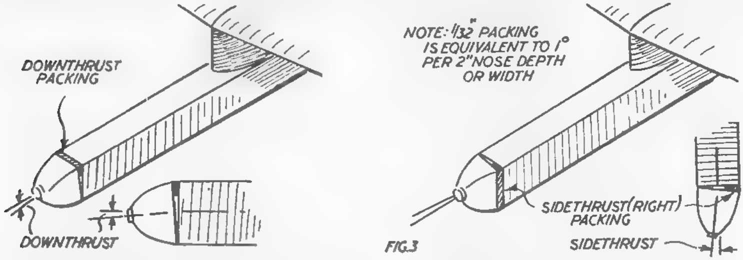
Most power models will need some engine downthrust and sidethrust if a well balanced flight is to be maintained.

Downthrust is needed to 'kill' or reduce power stalling. Excess downthrust results in a higher flying speed while the motor is running and should only be used if this is required.

Sidethrust is used to balance out the turning effect of motor torque. The final angle required for both sidethrust and downthrust must be determined with the engine running at its peak revs. on the particular propeller being used.

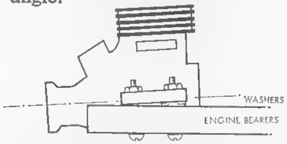
On the F/F model the left turn produced by torque is often not completely neutralised by the full quota of sidethrust. The aim being a gentle circling turn to the left under power.

Some short-nosed models such as many scale models and most that have little or no dihedral will require a large sidethrust angle, perhaps 5-10 degrees, whereas the long-nosed types may only require say, 1 or 2 degrees. The greater the wing dihedral or wing sweepback the less sidethrust will be needed. Some low winged models, due to the lower dihedral effect present, will often require fairly large sidethrust angles.

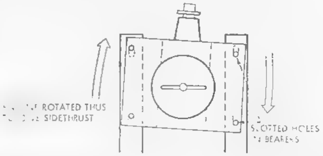

DOWNTHRUST PACKING
DOWNTHRUST
NOTE: 1/32" PACKING IS EQUIVALENT TO 1° PER 2" NOSE DEPTH OR WIDTH
SIDETHRUST (RIGHT) PACKING
SIDETHRUST
FIG.3

We obtain downthrust and sidethrust on the rubber model by packing the propeller nose block.

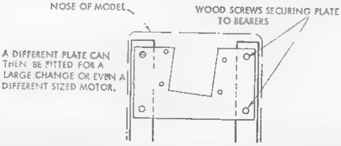
On the power model washers can be placed under the engine mounting lugs to introduce a downthrust "angle."



For small angles of sidethrust the bolt holes in the engine bearers can be elongated, so allowing the engine to be slewed round in its mounting. Undersized "sloppy" bolts can also give a similar effect.

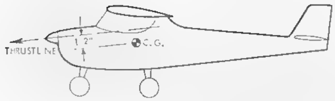


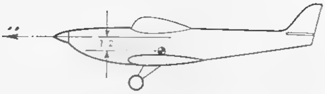
For large angles this method is not a good idea as it considerably reduces the strength of the engine bearers. It is always a better plan to fix the engine bearers to the sides of the fuselage and mount the engine on a fibre board or aluminium plate with an angled cut-out for the engine. This is screwed to the bearers by wood screws.


NOSE OF MODEL
WOOD SCREWS SECURING PLATE TO BEARERS
A DIFFERENT PLATE CAN THEN BE FITTED FOR A LARGE CHANGE OR EVEN A DIFFERENT SIZED MOTOR.

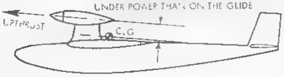
Downthrust does not necessarily manifest itself as an angle of engine tilt. It does, however, show up as a thrust line passing somewhere above the C.G.

Usually a distance of about ¼ in. is sufficient for all sizes of model. On the low-wing model, the C.G. comes low down and hence little or no downthrust angle is needed.





It can thus be seen that another way of producing downthrust effect is to lift the engine higher up. On the model with a very high mounted engine it may even be necessary to point the engine upwards in order not to increase the thrust off-set too much.



IF THIS DISTANCE IS TOO GREAT THE MODEL WILL PROBABLY WANT A LOT OF POWER AND MAY TRY TO FLY MUCH FASTER UNDER POWER THAN ON THE GLIDE

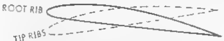
STAGE 5

The model should now be able to fly well, in which case settings can be left alone. However the F/F or R/C model, although at first appearing O.K. on short flights, may subsequently develop a tighter and tighter turn on the longer flights. This terminating in a spiral dive in either direction. The cure for this is to increase the dihedral or REDUCE the size of the fin. Remember an over large fin is conducive to spiral instability. This applies to all models.

Once a satisfactory glide has been achieved leave the C.G., wing and tailplane incidence alone. Do all adjustments to the power on state by altering the engine as stated in stage 4.

FURTHER NOTES

On some models, mainly gliders and similar types with high aspect ratio wings, wing WASHOUT is used. Washout refers to the twisting of the wings in such a way so as to produce less incidence, or angle of attack, at the tips than at the root of the wing, i.e. the same effect as lifting the trailing edge of the wing at the tips only.



WASHOUT (ANGLES EXAGGERATED)

The idea behind washout is to eliminate or reduce the risk of wing tip stalling. It is always a good idea to use washout on a radio controlled glider or slope soarer to reduce the chance of uncontrolled spinning if a wing tip stall is accidentally induced.

REMEMBER, THERE IS NO LASTING TRIMMING CURE FOR A BADLY BUILT OR WARPED MODEL.

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Schoolboy:—R/C single channel, kick-up elevator .010 (.2cc) 35 in.
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N.A. Harvard:—C/L profile scale .020 (.32cc) 16½ in.

M.A.N. 7A
Angel:—F/F high thrustline F.A.I. Power .15 (2.5cc) 61 in.
Chaparral:—R/C low wing pylon racer .19 (3.5cc) 62 in..

M.A.N. 10A
Dizzy Bug:—C/L F.A.I. speed model .15 (2.5cc) 21¾ in.
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Long Gone:—C/L class 'B' team racer .29 (.5cc) 29½ in.
The Hot Canary:—F/F pylon model .010-.020 (.2-.32cc) 33 in.

M.A.N. 11A
Wittman Super Tailwind:—F/F scale home built .049 (.8cc) 32 in.
Topkick:—F/F high performance A/1 tow-line glider 47½ in.
Twin's Special:—C/L proto speed winner .29 (.5cc) 36 in.

M.A.N. 14A
U-Name-It:—R/C stunt "newlook" model .35 (.6cc) 55 in.
Fluff:—F/F ultra simple ½A model .049 (.8cc) 48 in.

M.A.N. 16A
Miss America:—R/C single channel trainer .49 (.8cc) 42 in.
Sli-Fai:—F/F microfilm indoor 36 in.
M-2:—F/F microfilm indoor F.A.I. specs. 34½ in.
Sparkler:—F/F Cox engine sportster 30 in.
XA-8:—C/L stunt/combat .049 (.8cc) 10in.

M.A.N. 17A
Skyscraper:—C/L stunter, jet lines .35 (.8cc) 60 in.
Lady Bug:—F/F all sheet biplane .020 (.32cc) 24 in.
Rocket Delta:—F/F jetex powered contest delta 18 in.

M.A.N. 18A
X-80:—F/F high thrustline .049-.09 (.8cc-1.5cc) 47½ in.
Convair XP 81:—C/L scale .15-.19 (2.5-3.5cc) 29 in.

M.A.N. 20A
F.A.I. Viking:—F/F high thrustline F.A.I. power .15 (2.5cc) 65 in.
Target:—C/L flying saucer 8 in. dia. .010 (.2cc).
Bulls Eye:—C/L flying saucer 19 in. dia. .15 (2.5cc).

M.A.N. 22A
Weekend Wonder:—C/L easy construction stunter .29 (.5cc) 38 in.
Red Coat:—F/F Wakefield Rubber 50 in.
Hi-Lo-Duo:—F/F pair of rubber models indoor or out 20 & 19 in.
Moonbeam:—F/F tractor pusher rubber flier 20 in.

M.A.N. 24A
Two-Ber:—F/F Wakefield or open rubber model 44½ & 56½ in.
Chameleon:—R/C single channel semi-scale .06-.09 (.1cc-.5cc) 38 in.
Papa Taga:—C/L F.A.I. team racer .15 (2.5cc) 37 in.

M.A.N. 25A
Hughes H1 Racer:—C/L scale model, throttle control .60 (10cc) 44 in.
Corby:—F/F semi-scale sports flier .020 (.32cc) 26¼ in.
Aeronca Defender:—F/F scale rubber 27 in.

M.A.N. 29A
Uranus:—F/F contest power duration .049-.09 (.8cc-1.5cc) 49 in.
Pegasus:—C/L twin boom stunter .35 (6cc) 49 in.

M.A.N. 30A
Raunchy:—C/L combat model .35 (6cc) 35½ in.
Mauler:—C/L carrier deck landing .35 (6cc) 29 in.
Poncelet Vivette:—F/F semi-scale sports .020 (.32cc) 30 in.
Dadson:—C/L foam wing sportster .049 (.8cc) 24 in.

M.A.N. 34A
Demon:—C/L class 'B' combat, remote elevator .35 (6cc) 35 in.
Tempest:—F/F power duration .049-.09 (.8-1.5cc) 51½ in.
Envoy:—C/L small stunter, with "big" lines, .049 (.8cc) 31½ in.

M.A.N. 36A

Uranus F.A.I.:—F/F F.A.I. power, .15 (2.5cc) 64 in.

Super Flipper:—C/L stunter half wing flaps .15 (2.5cc) 35½ in.

M.A.N. 37A

O.K. Two:—0.2 R/C twin engine .020 (.32cc) single channel 38 in.

Moustique:—F/F high thrustline Coupe d'Hiver 45 in.

King Rat:—C/L Rat race .35 (6cc) 25in.

M.A.N. 38A

Swamp Box:—R/C single channel .09-.15 (1.5-2.5cc) 48 in.

Li'l Duster:—C/L ½A speed model .049 (.8cc) 8½ in.

Chipper II:—F/F sports, all sheet, .020 (.32cc) 30 in.

M.A.N. 42A

U-All 2:—R/C "Galloping Ghost" .020 (.32cc) 50 in.

Belly Dancer:—F/F Wakefield rubber 48½ in.

Two Tube:—C/L twin boom sport .049 (.8cc) 27½ in.

M.A.N. 45A

Morane Saulnier:—R/C aerobatic glider 56½ in.

Grabber:—F/F Wakefield or open rubber model 50¼ in.

M.A.N. 47A

Veedo:—R/C aerobatic single channel .19 (3.5cc) 57½ in.

Suspense:—F/F F.A.I. power simple construction .15 (2.5cc) 60 in.

M.A.N. 48A

Republic P47N:—R/C multi scale .60 (10cc) 63 in.

Cougar Nesmith:— F/F scale rubber, cabin, 26 in.

M.A.N. 50A

Santa Maria:—R/C single channel scale .09 (1.5cc) 42 in.

Sundowner:—F/F open power .15-.23 (2.5-3.83cc) 61 in.

Blue Bonnett: C/L open speed .15 (2.5cc) 16½ in.

M.A.N. 52A

Skypirate:—McCoy 60 or similar powered Carrier C/L design based on Douglas XTB D-1. 40 in. span.

Bonetti P39:—Semi-scale full multi R/C design of 69 in. span based on Airacobra, templates for foam wing plus std. structure ST 56.

M.A.N. 53A

Petite Parasol:—R/C single channel sportster, .09 (1.5cc) 41½ in.

Pink Fink III:—C/L rat racer, profile fuselage, .29-.35 (5-6cc). 27¼ in.

Douglas 0-43:—F/F scale observation plane .049 (.8cc) 40¾ in.

M.A.N. 54A

P-38:—C/L stunter based on W.W.2 fighter .35 (6cc) 55¼ in.

A Go-Go:—F/F contest pylon, simple construction .49 (.8cc) 47 in.

R/C Float:—R/C floats for multi models 34 in. x 4 in.

M.A.N. 55A

Klutzbug:—R/C aerobatic multi-trainer .35-.40 (6-7cc) 64 in.

Olympia:—F/F Wakefield 50 gram 49½ in.

M.A.N. 56A

Lockheed Vega:—R/C detailed free flight scale for .049 (.8cc) engines. Suitable for single channel. Span 43 in.

Traveller:— Indoor microfilm covered flier, 18 in. span, by Bud Tenny.

M.A.N. 57A

Ryan PT-22:—C/L scale trainer easy to fly .35 (6cc) 50 in.

Ringer:—F/F ½A contest model .049 (.8cc) 42 in.

M.A.N. 58A

AG-1 Duster:—C/L semi-scale stunter by G. Aldrich .35 (6cc) 53 in.

Billy Boy:—F/F rolled sheet fuselage Wakefield 41½ in.

M.A.N. 59A

Viper II:—C/L proto speed, mono line .29 (5cc) 24 in.

Harbinger:—F/F A/2 twice in U.S.A. team by N. Ingersoll, 82 in.

Mayfly:—R/C single channel trainer .09 (1.5cc) 36 in.

M.A.N. 60A

Aeronca C-3:—R/C scale s. chan. .09 (1.5cc) 53½ in.

Pat-1:—C/L basic trainer **.049 (.8cc) 24 in.**

Javelin Jnr:—F/F, R.O.W. ½A pylon .049 (.8cc) 50 in.

M.A.N. 61A

Plane Jane:—R/C low wing multi .60 (10cc) 70 in.

Furstep:—F/F cabin rubber trainer 24 in.

Little Pronto:—C/L basic trainer .049 (.8cc) 18 in.

M.A.N. 62A

Mosquito IV:—Twin rubber 26 in. or .010.

Fleet:—Scale R/C multi biplane 63 in., .60 (10cc).

M.A.N. 63A

Li'l Champ:—R/C single channel trainer .049 (.8cc) 36 in.

Mystere:—C/L stunter .40-.49 (6.5-8cc) 60 in.

M.A.N. 64A

de Bolt Chief:—R/C low wing multi .46-.60 (8-10cc) 64 in.

Super Twister:—C/L class B combat .35 (5-7cc) 36 in.

M.A.N. 65A

Road Runner:—C/L stunter .35 (6cc) 54 in.

Stratolark:—F/F open rubber, contest model, 52 in.

M.A.N. 66A

Oily Bird:—R/C rudder and elevator control .29-.60 (5-10cc) 56 in.

Prop Buster:—C/L profile trainer .15-.29 (2.5-5cc) 27 in.

M.A.N. 67A

Hoptee:—C/L hot rat racer .29-.40 5-6.5 cc) 27 in.

Demoiselle:—F/F scale sport .20 engines, 29½ in.

Daddy Rabbit:—R/C multi aerobatic .60 (10cc).

M.A.N. 68A

Chipmunk:—R/C scale and aerobatic multi, 8-10cc 59 in.

290 Special:—C/L trainer for "ready to fly" Cox engines 18 in.

Ugly Duckling:— F/F towline glider, simple construction 30 in.

M.A.N. 69A

Trailblazer:—F/F ½A pylon contest .049 (8cc) 46 in.

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M.A.N. 70

N.A.-S.N.J.:—C/L scale "Harvard" .29-.35 (5-6cc) 42 in.

Atlantis:—F/F power duration .09 (1.5cc) 52 in.

Tipsy:—C/L scale .29-.35 (5-6cc) 40 in.

M.A.N. 70A

Martin Marauder:—C/L twin engine scale .29-.35 (5-6.5cc) 54 in.

De Havilland D.H.4:—F/F simple scale .020 engines, 42 in.

M.A.N. 71A

Super Satan:—C/L combat hot flying wing .35 (6cc) 39½ in.

Wydawake:— F/F advanced Wakefield rubber contest model, 58 in.

M.A.N. 72

Brewster Buffalo:—C/L .35 (6cc) 35 in.

Sliver:—R/C multi pylon racer .19-.60 (3.5-10cc) 59 in.

M.A.N. 72A

Rearwin Sportster:—1/10th scale R/C sportster 42 in., .049 (.8cc).

GRMZPF-8—Rat racer, 36 in. .040 (6.5cc).

Small Wonder:—Jetex 50 pusher, twin boom, 17 in.

M.A.N. 73A

Nova Too:—Multi-motor, multi R/C 58 in. .15-.45 (2.5-7.5cc).

DH 85 Leopard Moth:—Rubber scale, geared motor 42½ in.

M.A.N. 74A

Henchman:—Aerobatic multi for proportional .60 cu. in. (10cc).

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M.A.N. 77

Krazy Kat:—C/L Stunt and combat .09-.19 (1.5-3.5cc) 36 in.

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M.A.N. 78

Fly Rod:—F/F ½A power duration .049 (.8cc) 45 in.

Curtiss Robin:—C/L rubber powered R.T.P. model 31 in.

Miss America:—F/F ½ size version of vintage model .020 (.32cc) 30 in.

M.A.N. 80

Five Giant Steps:—Complete building course, chuck glider R.O.G. rubber, profile rubber, built up rubber 0.020 F/F.

M.A.N. 85

Lowdown:—F/F indoor model (microfilm) 31 in.

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M.A.N. 86

Curtiss Robin:—R/C scale single channel .049 (.8cc) 40 in.

Palque:—F/F ½A contest trainer .049 (.8cc) 42 in.

Paa-Able:—F/F PAA load model .020 (.32cc) 35½ in.

M.A.N. 87

Curtiss Triad:—C/L scale, .15 (2.5cc) 44 in.

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2247 Buzzard	J & K

MILES

2063 M.21 Hawk Speed 6	A & J
2292 Sparrowjet	A & J
2813 M20	A 1/-

HUNTING—PERCIVAL

2300 P.56 Provost	A 1/-
2301 Mew Gull P.6	A & J
2661 Jet Provost II	A & J
2837 Proctor V	A 1/-

PRESTWICK

2302 Pioneer II	A & J
R.E. *2703 RE8	A & F

SAUNDERS-ROE

2724 S.R. 177	A & J
2831 S.R.53	A & J

SHORT

2307 S.A.6 Sealand	B & L
2317 Seamew	A & J
S.E. *2694 S.E.5a	A & F

SLINGSBY

2812 Sky	A & J

SOPWITH

2741 Triplane	A & J
2320 Buffalo	A & J
2686 Snipe	A & J
2699 Camel	A & J
2751 Tabloid	A & J
2754 Dolphin	A & J
2779 1½ Strutter	A & J
2844 Pup	A & J

SUPERMARINE

2764 S5	J or H
2331 S6B	A & J
2335 Sparrow (1/48th scale)	1/-
2347 Spitfire Vb and Vc	A & J
2740 Spitfire IX & XVI	L & H
2048 Type 541 Swift	A & J
2355 Swift F4 and 5	A 1/-
2356 508	A & J
2357 510	A & J
2359 525	A & J
2828 N.113	A & J
2807 Seagull	A & J

VICKERS

2730 Vanguard	N & M
2358 Viscount 700 & 800	M & N
2360 Valiant	M & N
2659 Supermarine Walrus	A & J
*2722 Vimy	B & L
*2725 Stranraer	B & L
2810 Gun Bus FB9	A & J
2879 VC 10 (R.A.F.)	O & 1/192nd

WESTLAND

2398 Wyvern TF.Mk.IV	A 1/-
2684 Whirlwind Heli:	A & J
2848 Widgeon II & III	A 1/-
2854 Wessex	A 1/-
2873 Lysander	S & H 5/-

GLIDERS

2682 R.A.F. Training Gliders, Cadet 1, 2, 3, Eton, Perfect, Sedburgh	N only

AUSTRALIAN

2841 Victa Airtourer 100	A & J
2878 Victa Aircruiser 210	J & H

AMERICAN

AERONCA

2401 100	F 1/-

BOEING

2415 B.47	M & N
*2673 F4.B4	A & F
2710 P.26	A & J
*2753 Stearman PT 13, 17, 18	A & F
2867, 727, 727C, 727QC	M & N

BEECHCRAFT

*2770 Beech D-175 & G-175	A & F
2772 (Special lines drg.)	1/12th scale 3/-

BOWERS

2830 Fly Baby	J 1/-

CHANCE VOUGHT

2658 Cutlass F7U-3	B & L
2668 Crusader F8U-1	B & L
2723 Crusader F8U-3	B & L
2774 Corsair F4U-1	A & J

CHESTER

2726 Jeep racer	E & H

CONVAIR

2653 YF-102 (Prototype)	L 1/-
2226 F.102 (Production)	B 1/-
2821 XFY-1	A & J

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* AEROMODELLER "Famous Biplanes"

† AEROMODELLER "Aircraft Service"

CURTISS		
2671	Cleveland	A & F
*2698	Hawk P6-E and Goshawk FIIC-2	A & F
*2739	JN4D Jenny	A & F
2755	Navy Racer CRI, 2, 3	J & U
DOUGLAS		
2445	F4D-1 Skyray	A & J
2649	Skyhawk	A & J
*2777	World Cruiser	A & F
2783	DC-3 Dakota	N & T
2856	D 558 Skyrocket	A
2872	Dauntless	S & H 5/-
2876	Havoc (Turbinlite)	A & O
ERCO		
2446	Ercoupe 415G	A 1/-
FOLKERTS		
2771	Folkerts SK-3 Jupiter	A & H
GRANVILLE		
2789	Gee Bee R1.	J & H
GREAT LAKES		
*2748	(Harold Krier's)	A & F
GRUMMAN		
2683	F9-F8 Cougar	A & J
*2706	Gulfhawk & F3F-2	A & F
MEYER		
2701	Little Toot	A & K
LOVING WAYNE		
2707	Love	A & K
LOCKHEED		
2657	F.94 Starfire	A & J
2757	F104	A & J
McDONNELL		
2747	F4H-1 Phantom II	B & L
NORTHROP		
2738	N156 Freedom Fighter	B & L
NORTH AMERICAN		
2489	F86E Sabre	A & J
2491	100A Super Sabre	B & L
†2717	F100D Super Sabre	S & T
2647	Harvard	A & J
2766	Mustang P-51D	A & J
PESCO		
2745	(Roscoe Turner's)	J & F
REPUBLIC		
†2700	F84-F Thunderstreak	S & T
2713	F.105B Thunderchief	B & L
2793	P-47 Thunderbolt	S & H 5/-
2822	Thunderjet	J 1/-
RYAN		
2688	"Spirit of St. Louis"	L & F
SPECIALS		
*2732	Wright Flyer	A & F
2734	Pearson-Williams Mr. Smoothie	1/32 & J
2762	Cosmic Wind and Long Midget	A or J

FRENCH

2769	Mignet Flying Flea	J & H
2648	Druine Turbi	K & J
2655	Druine Turbulent	K & J
2646	Jodel Bebe	J & K
2645	Sud-Ouest Vautour	B & L
2665	Leduc 021	A & J
2685	Morane Parasol	A & J
*2679	Spad XIII	H only
†2693	Mystere Series	S & T
2720	SE. 5003 Baroudeur	A & J
2695	Nord Griffon	A & J
2728	Nieuport 17c	B & L
2750	Dassault MirageIII	B & J
*2760	Breguet XIX	O or B
2776	Nieuport 28	A & J
2782	Caudron 460	J & H
2794	Bernard V2	U & J
2797	Antionette Mono	A 1/-
2799	Deperdussin Racer	J 1/-
2811	Dewoitine D150	A 1/-
2814	Bleriot XI	A & J
2817	Spad Berlina	A & J
2853	Morane Saulnier B	A 1/-

BELGIAN

2711	Hanriot HD.1	A & J
2721	Tipsy Nipper	K & J
2805	Tipsy Junior	J 1/-

CANADIAN

2633	Avro Canada CF.100B	B & L
2652	D.H. Otter	B & L
2820	D.H.C. 2 Beaver	J 1/-

DANISH

2637	KZIII Lark	A only

DUTCH

FOKKER		
2636	F.VIIA	B & L
2875	FVIIA	A 1/-
2662	D.23	A & J
2802	Fokker FIII	A & J

GERMAN

2865	Fieseler Storch	A & J
2691	Fokker D.VII	A & J
2667	Fokker D.VIII	A & J
2678	Fokker DRI Triplane	J & F
2746	Albatross DII	A & J
2676	Albatross D.III & D.Va	H only
2705	Albatross C.3	A & J
2563	Klemm L25/IA	A & J
2790	Messerschmitt Me 109 E	S & T
2881	Messerschmitt Bf110	S. & T. 5/-
2580	Zaunkonig	F & J
2687	Junkers Ju. 87D & G	L & B
2880	Junkers D1	K & J
*2712	Bucker Jungmeister	A & F
2697	Pfalz Dr. I	A & J
2787	Pfalz D.III	A & J.
2874	Pfalz DXII	F & J
2719	Roland D VIb	A & J
2737	Hannover	A & J
2748	Dornier Do 28	A & J
2756	Etrich Taube	A & J
2869	Focke-Wulf Stosser	L & F
2761	Focke-Wulf 190 A5, A8	B & H
2773	Halberstadt CL-2	A & J
2860	Moeller Stomo 3	A & H
2796	Roland Walfisch	J 1/-
2815	Arado AR68G	A 1/-
2816	Brandenburg Seaplane	A & J
2819	Heinkel He162 Salamander	J 1/-
2826	Siemens Schuckert D4	F & J
2829	Phoenix C.I.	J 1/-
2836	Halberstadt Scout	A & J
2846	Hansa Brandenburg CI	A & J
2849	Fokker E II & E III	A 1/-

ITALIAN

2674	Fiat CR-42	A 1/-
2715	Fiat G.91	A & J
2800	Macchi Castoldi MC72	A & J
2847	Piaggio PC7	J 1/-
2863	Macchi MB 326	A & J

MASTER LIST OF AIRCRAFT PLANS 1940-1968

Indexed for easy reference in this catalogue and identification of code number and price. (See also Page 24)

Note

Plans marked with the suffix 'X' are not illustrated in the catalogue but are still available on delayed delivery. These are out-dated vintage designs. The date of original publication is quoted for example **—8/40** means **August 1940.** This is for info' only, back numbers are not available for more than the past three years

IF THE DESIGN IS NOT LISTED HERE WE CANNOT SUPPLY IT

Name	Code No.	Price	Ref.
A.B.C. Robin	FSR239X	3/9	7/46
A.B.C. Robin	FSP564X	6/9	9/54
Able Gull	CL836X	9 /-	4/63
Ace of Diamonds	U707X	7/6	8/58
Achilles	PET543X	8/-	3/54
Aegeus	G106X	3/6	1940
Aeolus	G102X	4/-	1949
Aero Commander	CL733	8/6	P 35
Aero Commander 560	MA286X	7/6	7/58
Aeromodeller Wakefield	D288X	5/3	4/48
Aeronca C-3	MA285	5/-	P.25
Aeronca Grasshopper	MA281	10/-	P.84
Aichi 99 "Val"	MA349	7/6	P.32
Aiglet	G643	3/6	P.66
Airfoil Section Grids	761X	5/-	6/60
Airspeed Courier	FSP/1016	3/6	N.I.
A/T Sportster	PET961	10/-	P.61
Albatross	FSP646	7/6	P.17
Altagerra	MA354X	7/6	9/61
Altair	G602	6/-	P.68
Ambassador	CL457	4/-	P.77
Angular Angel	MA328	3/6	P.51
Anita	MA320	5/-	P.58
Ansaldo S.V.A.4	MA359	10/-	P.31
Apollo	PET819X	6/-	5/62
A.P.6	G103X	6/-	1940
Aquarius	WP423	5/6	P.46
Aquila	G681	7/6	P.65
Archangel	G368	5/6	P.63
Ariel	CL325X	6/-	7/49
Aries	RC/G698	6/6	P.88
Aristocrat	D311	5/-	P.45
A.W. FK8	FSP960	7/6	P.26
A.W. Siskin III	CL742	5/-	P.29
A.W. Siskin IIIa	MA314 -	10/-	P.21
Arnhem	G263	3/-	P.61
Arrow Active	FSP691X	15/-	3/58
Arrowhead	D584X	5/6	5/55
Arrow 100	J511	4/-	P.47
Arsenal Delanne 10	FSP/1024	3/6	N.I.
Ascender	U436X	6/-	7/51
Astro-Hog	RC699	15/-	P.89
Atakee	PET577X	7/6	2/55
Atalanta	G105X	4/6	1940
Atlantis	PET747X	7/6	12/59

Name	Code No.	Price	Ref.
Aurikel	MA171	7/6	P.67
Auster A.O.P.9	FSP580	4/6	P.25
Auster B4 Ambulance	FSP531	6/-	P.21
Auster B4 Ambulance	MA148X	3/6	3/53
Auster Workmaster	RC821	6/6	P.86
Austin Whippet	FSP480X	9/-	T/52
Avro Athena Mk. II	MA312X	3/6	7/59
Avro Avian Sports	FSP468	6/-	P.20
Avro Avis	FSP937	3/6	P.26
Avro 504 K	FSP343	5/6	P.20
Avro Shackleton Mk. III	CL746	8/6	P.34
A.V.10	TG240	4/6	P.50
Baby Micro-Film	1/108X	3/-	1940
Baby R.O.G.	1/109X	2/-	1940
B.A.C. Super Drone	MA193	5/-	P.12
Bad Pyrmont	G358X	5/3	1949
Band Boy	RC777	6/6	P.87
Baron Knight	D894	3/6	P.44
Bar Fli	RC950	12/6	P.92
B.A. Swallow	FSR110X	3/9	1941
B.A. Swallow	FSP560	5/-	P.18
Bazooka	D348X	5/-	2/50
Bazz Bomb	RC868	7/6	P.84
Beaconeer	RCG770	7/6	P.88
Beatnik	MA325X	6/-	6/60
Beginners Bi-Plane	D113X	1/6	1941
Bell Airacobra	FSR/100X	3/6	1940
Bell Airacobra	MA251	5/6	P.32
Bellanca Cruisemaster	MA208X	6/-	1/57
Bellanca "Skyrocket"	MA396	6/6	P.12
B.E.2C	FSR215X	10/-	12/43
B.E.2E	FSP721	7/6	P.18
Bev	MR228X	2/-	1/56
B.G.44	G498X	9/-	1/53
Bicki	RC628	7/6	P.84
Big-stuff	D114X	6/6	1941
Bim-Bam	D575X	4/6	2/55
Bi-Plane Sports	D112X	3/9	1941
Bi-Play	PET582	4/6	P.55
Bishop's Nieuport 17	FSP285	5/6	P.18

N.I.—Not illustrated.

Name	Code No.	Price	Ref.
Bittern	D259X	4/6	3/47
Blackburn Mono	FSP567	6/–	P.16
Black Chiffon	CL486X	5/–	11/52
Black Ghost	MA295X	3/6	10/58
Black Magic	PET268	5/6	P.57
Bleriot Monoplane	FSR275	6/6	P.40
Blister	RC815	10/6	P.86
Blitz	PET871	3/6	P.60
Blue Bayou	CL/1005	3/6	N.I.
Bluebottle	CL526X	6/–	9/53
Blue Pants	CL574	4/6	P.79
Boeing—F4B-4	MA290	5/–	P.28
Boeing XL 15	FSP395X	7/6	10/50
Boom	PET714X	5/–	2/59
Borderline	D512X	7/–	5/53
Boulton Paul DIII	J548X	6/9	5.54
Bouncer	CL808	5/–	P.73
Bowden Contest	PET225X	10/–	11/55
B.M.I	WP365X	5/3	1/49
Brandenburg Sea Monoplane	MA343	6/–	P.24
Breguet 901	FSG680	3/6	P.62
Brevity	MA46X	4/–	7/49
Brewster F2A-1	MA367	5/6	P.32
Bristol Beaufighter X	MA275	10/–	P.28
Bristol Bullet	FSR226	4/6	P.38
Bristol Bulldog	FSP762	7/6	P.22
Bristol F2B	FSR111	3/6	P.38
Bristol F2b Fighter	FSP/1021	3/6	N.I.
Bristol Monoplane Scout	FSP759	7/6	P.15
Bristol 77 Racer	FSR216X	6/–	10/44
Brooks Biplane	PET492	8/6	P.58
Bucker Jungmeister	FSP807	6/–	P.25
Bucker Jungmeister	CL/1020	6/–	N.I.
Buck's Duck	PET337X	12/–	10/49
Buhl Sport Airsedan	FSP899	3/6	P.23
Bullet	PET626X	4/6	5/56
Bumblebug	CL437X	6/–	7/51
Buzzard II	U298X	3/6	8/48
Buzzcopter	U860	4/–	P.49
Byrdie	U601X	4/9	9/55
Cabin Bi-Plane	D115X	2/6	8/41
Cabin Monoplane	D116X	2/3	1941
Calamity Jane	CL489	6/–	P.78
Candy II	CL269X	7/6	9/47
Cannellard	D335X	3/9	10/49
Carden Baynes "Flying Flea"	FSP853	9/–	P.22
Celeritas	PET527	5/–	P.52
Celestial Horseman	G118X	15/–	1947
Cessna Airmaster	MA308	5/–	P.27
Cessna Bird Dog	FSP568	5/–	P.16
Cessna C-34	FSP753X	9/–	3/60
Cessna 172	FSP668	10/–	P.21
Cessna 172E	RC/FSP902	10/6	P.87
Cessna 310	CL638	6/–	P.35
Changi	PET743X	7/6	10/59
Chatterbox	PET/RC715	5/–	P.87
Cheetah	CL313X	4/–	4/49
Cherpaa	U618X	9/–	3/56
Cheshire Kitten	CL693	5/–	P.79
Cherub	PET485	5/–	P.55
Chick & Czech	G905	2/6	P.70
Chihuahua	CL/1004	3/6	N.I.
Chilton D.W.1	FSP340	3/6	P.19
Chloe	PET678	5/–	P.57
Chrislea Ace	FSP331	5/6	P.21
Chuck Glider Trio	G958	3/6	P.70

Name	Code No.	Price	Ref.
Chunky	PET768X	6/–	9/60
Cicada	PET927	3/6	P.60
Citizen Krote	RC929	10/–	P.90
Class 'B' Indoor Model	341	3/6	P.44
Cleaver	CL799	5/–	P.82
Climax	PET973	7/6	P.51
Clot	MA189X	5/–	7/54
Cloudline	D122X	3/9	1946
Cloudpin	MA313X	3/6	10/59
Clwyd Queen	U630X	7/–	7/56
Clown	RC971	15/–	P.90
Clubman	PET419X	5/–	3/51
Cobra	G317X	5/3	5/49
Coccinelle	PET752	6/6	P.59
Colonial Skimmer	MA250	6/–	P.24
Compact	MA347X	3/6	5/61
Comper Swift	FSP464X	7/6	2/52
Consolidated Catalina	CL606	7/6	P.28
Consul	PET474X	6/–	6/52
Contra Gyro	U644	5/–	P.48
Copland's Wakefield	D121X	6/–	12/46
Coquette	PET384X	5/–	7/50
Coriolis	G855	5/–	P.65
Corsair	G516	6/–	P.64
Cougar	CL673	5/–	P.78
Countdown	CL833	5/–	P.74
Courier	PET662	5/–	P.57
Coy Kat	MA344	7/6	P.80
Coy Lady	CL727	6/–	P.76
Crackerjack	CL303X	5/3	10/48
Cracow	G119	6/–	P.63
Creep	PET609	6/–	P.53
Cricket	PET/1007	3/6	N.I.
Crowfly	TG241	4/–	P.50
Cue Dot	G909	3/6	P.67
Cupid	CL708	4/6	P.72
Curtiss Hawk P.E.6	CL539	7/6	P.37
Curtiss Jenny	MA197	5/–	P.13
Curtiss Owl	MA159	6/–	P.19
Cutlass	U559X	5/–	9/54
Cyrano	PET760	5/–	P.54
Dactyl	U326	5/–	P.50
Daedelus	D124X	3/6	9/42
Daedelus	G748	5/–	P.69
Dalesman	CL763	5/–	P.74
Dart Kitten	FSP497	5/–	P.17
Dart Pup	FSP620	6/3	P.26
Dart Pup	FSP621X	8/9	2/56
D.B.12	G320X	5/3	6/49
Debutante	PET493	4/–	P.59
Delanne	FSR472X	6/–	5/52
Delinquent	D923	5/–	P.43
Delta 1	U490	4/6	P.50
Delta 707	RC649	6/–	P.88
Deltik	MA382X	3/6	8/63
Demon King	CL347X	5/3	3/50
Destroyer	CL471X	6/9	5/52
Devil	CL749	3/6	P.81
D.F.S. Reiher	MA315	7/6	P.70
D.H.C. 2 Beaver	FSP388	5/6	P.20
D.H.C. 1 Chipmunk	FSP290	7/6	P.20
D.H. Chipmunk	MA247	6/–	P.30
D.H.88 Comet	CL694	7/6	P.37
D.H.5	FSP879	6/–	P.17
D.H.84 Fox Moth	FSP654	6/9	4/57
D.H.60 Gipsy Moth	RC135	17/6	P.25
D.H. Heron	MA236	10/6	P.30
D.H.9A	MA174	5/–	P.31

Name	Code No.	Price	Ref.
D.H. Mosquito	CL570	7/6	P.34
D.H. Moth Minor	FSR168	3/6	P.40
D.H. 80A Puss Moth	FSR256	2/–	P.39
D.H. 80 Puss Moth	FSP891	10/–	P.24
D.H. 108 Swallow	J479	4/6	P.47
D.H. 82A Tiger Moth	FSR197	5/–	P.38
D.H. 82A Tiger Moth	FSP555	6/–	P.17
D.H. Tiger Moth	MA269X	5/–	12/57
D.H. Vampire Mk V	CL523X	9/–	8/53
Dizzy	1249X	3/6	9/46
Dizzy Diesel	PET276X	4/6	12/47
Djano	MA329X	2/6	5/60
Dolphin	PET315X	12/–	4/.49
Dominator	CL893	3/6	P.82
Dongus	CL780	5/–	P.83
Don Quizote	G356X	2/6	–/49
Doohicky	PET565	5/–	P.55
Dorland	D248X	4/6	9/46
Dornier 215	CL627	7/6	P.35
Dornier 27	FSR/P796	5/–	P.39
Doughnut	U524X	7/6	9/53
Douglas A.26 Invader	CL520	6/–	P.36
Douglas Dakota	CL765	8/6	P.36
Douglas 046A	FSR518X	9/–	7/53
Downbeat	G867	3/6	P.64
Dragoon	MA342	5/–	P.76
Dragonette	U885	5/–	P.49
Dragonfly	U562X	7/–	10/54
Dream Bogey	G330X	7/9	8/49
Dream Weaver	PET653	7/6	4/57
Druine Turbulent	MA318	3/6	P.13
Druine Turbulent	FSP613	3/–	P.19
Dryad	WP230X	7/6	2/46
Duck Foot	WP611X	7/–	12/55
Duellist	CL648	5/–	P.82
Dunne Type Tailless	U652X	5/–	3/57
Dusty Mk. VIII	D233X	3/9	4/46
Dusty	CL944	3/6	P.73
Dynamo	PET812	5/–	P.53
Early Bird	CL1022	3/6	P.80
Edgar Percival EP9	FSP722X	10/–	3/59
Effie Aye	MA360X	4/–	1/62
Electra	RC506	5/–	P.87
Elf Axe	PET473X	7/–	5/52
Elf Cat	CL703	3/6	P.79
Elfin Mk. II	PET289X	4/6	5/48
Eliminator	PET510	5/–	P.52
Ellipitas	MA356X	3/6	10/61
Elmira	G127X	5/3	1946
Endeavour	PET769X	9/–	10/60
English Electric Wren	FSP466	6/–	3/52
Envoy	PET461	4/–	P.57
Ercoupe	CL385	5/6	P.34
Erk	RC/1015	6/–	N.J.
Eros	PET280X	10/–	1/48
Estrellita	D616X	5/–	1/56
Ethereal Lady	PET291	5/–	P.56
Eureka	PET711X	5/–	10/58
Evander	G224	6/–	P.69
Everest	G706X	5/–	9/58
Executor	MA379X	6/6	5/63
Fairchild Argus	FSR272	4/6	P.39
Fairchild P.T. 19 Cornell	MA400	7/6	P.36
Fairey Flycatcher	FSP586	6/–	P.15
Fairey Fulmar	MA363	3/6	P.20
Fairey Gannett	CL631	6/6	P.37
Fairey Gannett	MA380	6/6	P.28
Fairey Swordfish	FSP535X	9/–	12/53
Fairey Swordfish	MA178X	5/–	3/54
Faital	PET881	8/–	P.53
FA1 Team Racer	MA361X	4/–	1/62
Fantasm	MA164X	3/6	10/53
Farthing Micro-Film	1/223	4/–	1947
Featherweight	1/309X	3/9	1/49
F.E.8	FSP459	6/–	P.23
Fevair	MA336X	5/6	10/60
Fieseler Storch	FSP669	7/6	P.22
Fifteen	PET521X	9/–	8/53
Fighter Glider	G107	3/6	P.69
Fillibuster	D257X	5/–	3/47
Fillons Champ	G260X	21/–	3/47
Finnair	G672X	7/–	9/57
Firefly	D128	2/6	1942
Firefly	MA371	7/6	P.75
Firebrand Mk. II	CL380X	5/–	6/50
Fishface	PET851	3/6	P.54
Fizzlequick	J599	4/–	P.47
Flamingo	PET377X	7/6	5/50
Flanders Flyer	PET354X	4/9	/49
Flap Happy	U333	5/–	P.49
Flash	CL375X	3/6	4/50
Fledgeling	PET451X	4/6	11/51
Fleet Finch	MA201	5/6	P.15
Flicka	CL363X	5/–	/49
Flip	MA276	5/–	P.83
Flip-Flop	D463X	6/–	2/52
Floating Kidney	U251	4/–	P.50
Floridian	G847	6/–	P.65
Flutterbus	D797X	4/–	8/61
Flying Bomb	G357X	5/–	/49
Flying Enterprise	G786	4/–	P.66
Flying Tiger	CL843	5/–	P.79
Flying Washboard	U888	3/6	P.49
Flying Wheel	MA191	2/–	8/54
F.19 Swiss	PET353X	12/–	10/49
Focke-Wulf F.W.190	FSR129	3/6	P.38
Focke-Wulf F.W.190	FSP935	7/6	P.13
Focke-Wulf Moskito	MA319	7/6	P.31
Focke-Wulf 190a	MA271	3/6	1/58
F.W. Stosser	FSP617	4/9	P.18
Fokker D.R.I Triplane	FSP453	6/–	P.14
Fokker D.III	CL623	6/–	P.29
Foker D.VII	FSR297	4/6	P.38
Foker D.VII	CL403	5/–	P.33
Foker D.VII	FSP916	4/–	P.26
Foker D.VIII	MA353	5/–	P.12
Fokker D.XVII	CL712	5/–	P.33
Fokker E.IV	FSP551	4/6	P.17
Fokker E.IV	MA364	3/6	3/62
Fokker Friendship	CL856	10/–	P.37
Fokker F.VIIb	CL688	7/6	P.35
Fokker F.VII B 3 M	FSP445	6/–	P.19
Fokker Duration	D130X	5/3	1942
Fokker Triplane	CL307	5/–	P.33
Footprint	CL589X	4/6	6/55
Forwarder	G483X	9/–	9/52
Foster Wickner Wicko	MA194	6/–	P.13
Foursome	U596	2/6	P.41
Foxstunter	CL406	5/–	P.76
Frankenstien	PET346	5/–	P.56
Fresco	CL845	5/–	P.74
Fried Fritter	PET563X	9/–	10/54
Fugitive	G258	5/–	P.63

Name	Code No.	Price	Ref.
Gasser	RC744	6/6	P.84
G.A. Hotspur II	G144X	6/–	10/42
Garter Knight	D809	3/6	P.42
G.B.2 Flying Boat	WP134X	5/3	12/41
G.B.8	CL502X	4/6	2/53
G.B.IX	G676	5/–	P.64
Gee-String	RC792	10/–	P.87
Geisha Girl	MA324	6/–	P.28
G.H.20	D217X	3/9	6/44
G.H.27B	D281X	4/6	1/48
Ghost Rider 50	RC957	7/6	P.92
Ghoul III	U435X	6/–	7/51
Gigi	PET872	3/6	12/64
Ginmill	CL828	5/6	P.81
Glenelg	PET229X	14/–	10/46
Globe Swift	CL484X	6/3	9/52
Gloster Gamecock II	FSP410	7/6	P.20
Gloster Gladiator	FSP719	7/6	P.25
Gloster Gladiator	MA322	9/–	2/60
Gloster Meteor IV	J293	3/6	P.47
Gnat	MA48	2/–	7/48
Golden Wings	G594	2/6	7/55
Goldwinga	D900	3/6	P.43
Goliath	RC312	18/6	P.87
Go-Jet	RC925	5/–	P.90
Gook	CL501X	5/–	2/53
Gossamer	PET327X	5/–	7/49
Greengage	D561X	9/–	AMA.54/55
Griffon	MA292	5/–	P.79
Grmzpf 8	CL940	5/–	P.73
Grumman F8F-2 Bearcat	MA214	5/–	P.30
Grumman Wildcat	MA184	5/–	P.21
"334 G"	CL632	6/–	P.78
Guidato	RC677X	10/–	11/57
Guillie	MA375	5/–	P.57
Gull	WP850	10/–	P.46
Gull Flying Boat	WP137X	5/3	1943
Gutteridge Trophy Winner	D138X	5/3	7/41
Half Tone	MA357	5/–	P.89
Handley Page Halifax	FSR140X	9/–	5/43
Handley Page Halifax VII	CL919	10/–	P.36
Handley Page Hannibal	FSP615	8/6	P.23
Hanger	G972	3/6	P.67
Hanriot H.D.1	FSP837	6/–	P.23
Happy Harold	CL342X	5/–	12/49
Harpie	PET439X	6/–	8/51
Harlequin	CL557X	7/–	8/54
Hatchetman	G666X	6/9	7/57
Hawker Fury	CL745	5/–	P.32
Hawker Fury	MA40	3/3	2/48
Hawker Hart	CL462	5/–	P.30
Hawker Hart	MA374	7/6	P.31
Hawker Hind	FSP476	6/–	P.23
Hawker Hurricane	FSP862	10/–	P.16
Hawker Tempest II	CL336	4/6	11/49
Hawker Hurricane IIc	MA166	3/6	11/53
Hawker Hurricane	MA207	5/6	3/55
Hawker Typhoon	FSP372	5/6	P.14
Hawker Typhoon	FSR205X	9/–	12/44
Heatwave	PET686	6/–	1/58
Henschel Hs. 129	MA330	7/6	P.28
Heinkel He. 5 Hansa	FSP608	5/–	P.11

Name	Code No.	Price	Ref.
Heinkel He. 51	FSR141	5/–	P.38
Helides 7	PET401X	4/6	12/50
Hellbender	MA362	4/6	2/62
Hell's Bells	PET438X	7/6	7/51
Herald	FSR/1002	3/6	N.I.
Hi-Ball	PET271X	4/6	10/47
Hi-Liner	PET793X	9/–	7/61
Hi-Tee	MA388	5/–	2/64
H.K.1	FSP637	5/–	P.16
H.M.300	MA213	5/–	P.18
Honey Bee	FSP505	4/6	P.14
Hopit	CL417	5/–	P.79
Hoppity	U947	5/–	P.51
Horizon	PET913	3/6	P.60
Horsa II	PET332X	8/–	8/49
Hot Canary	PET525X	5/–	9/53
Hoverking	G379	5/–	P.69
Humbug	PET959	3/6	P.61
Hunting Percival Provost	CL720	5/–	P.33
Hussie	PET440X	4/6	8/51
H.V.450 (2 sheets)	RC262X	10/–	3/4/47
Icarus Junior	CL421X	6/–	4/51
Icarus Senior	CL422X	7/6	4/51
Igo	G222	5/–	P.62
Incentive	MA225	5/–	12/55
Invicta	G270X	4/6	10/47
Iolanthe	G296X	8/–	7/48
Iota	PET452X	5/–	AMA/51
Itzme	D147X	5/3	1/42
Ivory Gull	G148	5/–	P.69
Jabberwocky	CL514X	4/6	6/53
Jaded Maid	PET427X	7/6	5/51
Jader 60	G475X	9/–	6/52
Japp	RC945	3/6	P.93
Javahawk	U740	7/6	P.59
Javalan	U579	6/–	P.49
Jay	D151X	3/–	11/42
J.B.3	D149	4/–	P.45
Jeep	D152	3/6	P.43
Jefe II	CL932	5/–	P.75
Jetex Quads	J597	2/6	P.41
Jet Trainer	CL318	3/6	P.81
Jinx	G314X	8/–	3/49
Jodel Bebe	FSP591	4/6	P.16
Joss Stick	MA282X	3/6	5/58
Juggler	CL389	5/–	P.76
Jum Bux	PET/1008	3/6	N.I.
Jumpin' Bean	PET572X	4/6	1/55
Jumping Gemini	RC839	3/–	P.85
Jumping Jiminy	U488	5/–	P.48
June Bug	RC670	7/6	P.86
Junior Miss	D449	5/–	10/51
Junkers Ju 87D	FSP/CL675	5/–	P.15 & P.37
Junkers Ju 87D	RC884	10/–	P.85
Justin	MA390	4/–	4/64
Kapitan	PET247X	3/–	6/47
Karin	MA373	4/6	11/62
Karoro	PET496X	6/–	1/53
Kawasaki Tony (JR)	RC964	10/–	P.91
Ki 61 Tony	RC931	17/6	P.90
Kentish Wind	MA332	6/6	7/60
Kestral	MA238	4/–	5/56
Ketchup	CL886	3/6	P.82
Khamseen	G610X	4/6	11/55
King Falcon	G154X	8/–	1942
Kingfisher	FSR218X	5/3	8/45

Name	Code No.	Price	Ref.
Kirby Kite	G155X	4/6	1942
Kirby Motor Tutor	MA210	7/6	P.15
Kirby Tandem Tutor	FSG692	5/-	P.62
Kittiwake	WP757X	7/6	5/60
Klipper	MA351	2/6	8/61
Knight Errant	MA391	5/-	5/64
Kolibrik	PET245X	3/9	8/46
Komet	PET508X	9/-	5/53
Komm-Batt	MA288	5/-	8/58
Komar	D934	3/6	P.43
Kwod	PET787	5/-	P.54
Kyushu Shiragiku	MA383	4/6	P.12
Kookie	MA365	7/6	4/62
Ladybird	D287X	4/-	4/49
Ladybird Special	PET408X	7/6	AMA/50
La Mouette	G774	3/-	P.66
La Paloma	D639X	6/-	10/56
Last Resort	MA326	5/-	P.42
Lavengro	G405X	12/-	AMA/50
Lazybones	I157X	3/-	3/42
Lazybones III	CL387X	5/3	8/50
Leander	G156X	5/3	1942
Leprechaun	G370	11/-	P.68
Li'l Abner	CL478X	6/-	7/52
Li'l Aud	PET446X	6/-	9/51
Li'l Auk	WP/D685	5/-	P.46
Li'l Zowie	CL339X	3/6	11/48
Li'l Toot	MA138	2/-	11/52
Lindy	CL412X	3/-	1/51
Linnet	PET537X	7/-	1/54
Little Mavis	D890	3/6	P.44
Little Stinker	J413X	5/6	2/51
Little Stinker	MA98	5/-	P.30
Little Twister	MA387	3/6	P.48
Little Vagabond	PET136X	5/-	3/45
Lockheed Aermachi Santa Maria	RC963	3/6	P.91
Lockheed Lightning	FSR158	3/6	P.40
Lockheed Lightning	FSR159	5/-	P.40
Lockheed Lightning	CL671	7/6	P.34
Lockheed P2V	CL783	7/6	P.35
Lockheed Sirius	CL328	3/6	P.34
Loening OL-9	WP650	7/6	P .27
Long John	MA333	3/6	8/60
Loopstick	MA331	7/6	7/60
Lucifer	G645	6/-	P.68
Lucky Lady	MA215	3/6	7/55
Lulu Mk. II	G338	5/-	P.63
Lumpers	RC838	7/6	P.87
Luscombe 8A "Sky Pal"	FSP503	6/-	P.20
Luton Minor	FSP534	5/-	P.18
Luton Minor	FSP697	4/6	P.19
Lazy Daisy	CL428X	5/3	4/53
Macchi-Castoldi	CL788	7/6	P.29
Madcap	PET470	5/-	P.59
Mad's Dream	MA306	5/-	4/59
Mam-selle	PET612	15/-	P.58
Mandy	PET861	4/6	P.56
Man O'War	CL383X	3/9	7/50
Manx Arrow	U407X	3/6	1/51
Martian	MA175	3/6	2/54
Martinsyde Buzzard	MA327	7/6	P.32
Max Holste MH 152	PET593X	7/6	P.15
Mayflower	PET928	5/-	P.60
Meanderer	G683	7/6	P.67

Name	Code No.	Price	Ref.
M'schmitt Me 109	FSP/1017	3/6	N.I.
Messerschmitt M.E. 109E.	CL709	5/-	P.33
M.E. 163	FSG917	3/6	P.27
Messerschmitt ME 109E.	MA355	7/-	P.12
Messerschmitt Me210	MA395	8/-	P.33
Mercury	PET504	12/6	P.57
Merlu	D344X	6/-	12/49
Mermaid	WP162X	10/-	1942
Merry Miller	MA212	5/-	P.50
Meteor	CL397X	7/6	11/50
Micky	G969	3/6	P.61
Mick Farthing (Sailplane)	G228	3/-	P.63
Microwave	RC/1013	3/6	N.I.
Mig-15	FSP603	4/6	P.14
Mighty Mouse	MA151	2/6	5/53
Migrator	G826	7/-	P.65
Miles Beagle 218	CL874	15/-	P.36
Miles Gemini	MA221	7/6	P.30
Miles Hawk Speed 6	FSP434	6/-	P.25
Miles M.35	FSP576X	6/9	2/55
Miles M-38 Messenger	FSR/CL243	5/-	P.38
Miles Student	J629X	4/6	6/56
Mini Bunt O/P	CL901	3/6	P.82
Minicano	PET882	5/-	P.53
Mini Comet	RC892	6/6	P.86
Mini Early Bird	CL904	3/6	P.82
Mini Egal	G822	5/-	P.66
Min Weaver	PET/1012	6/-	N.I.
Minnie	RC766	4/-	P.88
Mini Clown	PET974	3/6	P.61
Mini Kema	RC870	8/6	P.90
Minni Mouse	CL825	5/-	P.73
Minx	RC/PET/G941	10/-	P.92
Miranda	WP605	4/6	P.46
Mistress	CL943	5/-	P.75
Missel Thrush	FSP404X	7/9	12/50
Miss Flighty	RC936	4/6	P.91
Miss F.A.I. III	CL778	5/-	P.74
Miss Margaret	D167X	5/3	1942
Mitsubishi Type 10	RTP942	6/-	P.26
Mitsubishi Zeke 52	MA249	3/6	10/56
M.K. Sportster	MA239	5/-	P.59
Moby Dick	G310	10/-	P.63
Moonbeam	RC938	7/6	P.92
Morane Saulnier Parasol	FSP924	3/6	P.26
Moss Trooper	PET962	6/-	P.61
Moth Minor	FSR168	3/6	P.40
M.P.12	G573	6/-	P.68
Mpunku	PET/1001	3/6	N.I.
Mudhopper	PET705	5/-	P.58
Mustunt	CL878	10/-	P.80
Nakajima B5N1 Kate	MA372	10/-	P.12
Nakajima Tenzan (Jill)	MA268	7/6	P.31
Natsneez	PET221X	4/6	11/44
Nebula	G552X	9/-	7/54
New A.M. Cabin	D494	2/6	P.45
Nieuport	FSP951	6/6	P.26
Nig-Nog	PET781	8/6	P.52
Nikolina	D873	3/6	P.44
Nimbus	G304X	12/-	11/48
Nipper	MA241	2/6	7/56
Nipper Mk. II	MA294	3/6	11/58

Name	Code No.	Price	Ref.
No. 96A	G814	9/–	2.62
Nordic Tern	G374	5/6	P.64
Nord 2	G409X	7/6	1/51
North American Havard	FSR139	5/–	P.40
North American Navion	FSR264	4/–	P.39
North American OV-10A	CL912	8/6	P.28
North Pole	MA370	4/6	8/62
North Star	MA338	5/6	P.43
Number Eight	G566X	9/–	11/54
Number Nine	MA366	5/–	P.48
Octet	U657	2/6	P.70
O-High-O	D726	5/–	P.42
Ohm 8	RC840X	6/–	5/64
Old Timer	D324X	8/–	7/49
Olympian	PET789X	12/–	6/61
Omega	G614	5/–	P.68
Opus	U190	8/6	P.50
Paage Boy	PET522X	7/–	7/53
Paa-Day	PET536X	6/9	12/53
P.A.A. Master	PET633X	6/–	AA/56
Paa-Packet	PET540X	6/9	2/54
Pacemaker	CL509X	4/6	4/53
Pagan	CL455X	7/6	AMA/51
Pal Joey	RC852	5/–	P.86
Pamyscaphe	D880	4/6	P.44
Pander E.G.100	FSP738X	8/–	9/59
Pandora	D755	5/–	P.45
Paragon	PET754X	6/–	4/60
Patches	G817	7/–	P.65
Pathfinder	PET513X	9/–	6/53
Patron	MA403	6/6	P.52
P.D.Q.	I647X	4/6	2/57
Peacemaker	CL687	5/–	P.83
Pedro	CL704	5/–	P.83
Pee Wee Creep	PET732	5/–	P.52
Pee Wit	PET779X	5/–	2/61
Pegasus	U396X	5/–	11/50
P1174	MA394	6/	P.85
Pelican	G622X	9/–	3/56
Penumbra	U739X	10/–	8/59
Pepe	PET835	4/–	P.59
Percival Mew Gull	CL600	4/–	P.72
Percival Mew Gull	FSR170X	3/–	1942
Percy III	D171X	4/6	8/42
Peregrine	PET547X	7/–	5/54
Peres 1	G242X	8/–	8/46
Peril	PET921	3/6	P.60
Pete	D172X	4/6	7/42
Pete's Plank	U429X	5/	5/51
Petrel	MA291	6/6	9/58
Pfalz D.3	FSP774	10/–	P.22
Phoenix	PET414X	10/–	2/51
Piaggio P.166	CL824	11/–	P.34
Picador	CL640X	9/–	11/56
Pika	MA352	7/6	P.89
Pinky	PET813	5/–	P.54
Piper Apache	CL756	6/6	P.35
Piper Commanche	CL970	8/6	P.32
Piper Commanche	MA317	5/–	P.27
Piper Pawnee	MA348	3/6	P.40
Piper Super Cruiser	FSP832	6/–	P.25
Piper 135 Tri-Pacer	MA227	3/6	1/56
Pipette	PET/1009	3/6	N.I.
Pierri 83	G767	7/–	P.68
Plover	MA337	4/6	1/61

Name	Code No.	Price	Ref.
Pluto	G723X	5/–	3/59
Poppet	MA334	3/6	P.60
Popsie	PET460	6/–	P.56
Pops	PET918	3/6	P.60
Potez 75	FSP581	4/6	P.39
President	PET393X	5/3	10/50
Preston	CL481X	6/3	8/52
Prestwick Pioneer	FSP425	5/6	P.16
Princess	CL724	6/6	P.75
Prop Secret	PET604X	7/–	AMA/55
Pteranadon	U624X	10/–	4/56
Pterodactyl	D173X	3/9	1943
Pulteri	PET764	7/6	P.52
Push Moth	RC895	7/6	P.84
Pushy-Cat	PET528	6/–	P.56
Pussyfoot	PET482X	6/9	8/52
Pylin	RC946	7/6	P.91
Pylonius	PET402X	5/–	1/50
P.Z.L. P26 Fighter	FSP487	6/–	P.19
Quartet	U595	2/6	P.41
Queen Bee	RC376X	5/6	5/50
Quest	RC915	5/–	P.91
Quickie	G517	6/–	P.64
RAF V.	D253X	4/6	1/47
Rake	MA377	5/–	P.51
Rambler	PET/1011	3/6	N.I.
Rascal	CL660	4/–	P.78
Ratatat	CL/1014	3/6	N.I.
Rattler	RC734	8/6	P.89
Razor Blade	CL729	5/–	P.83
Razzamachas	CL803	6/–	P.74
Rebel	PET394X	8/–	1/50
Red Admiral	D718	3/6	P.45
Red Dragon	CL842	5/–	P.76
Red Knight	RC949	7/6	P.92
Red Raider	MA165	3/3	11/53
R.E.8	FSP418	5/–	P.17
Remcon Versatile Tx	RC911	6/–	P.93
Republic Seabee	FSP319	7/6	P.14
Revenge	G415X	7/6	2/51
Riot Act	CL956	7/6	P.81
Roaring 20	PET695	5/–	P.57
Rocketeer	D234X	3/9	6/46
Ro-Dart	U456	3/–	P.48
Rohma	RC546	6/–	P.88
Rolling Stone	G876	6/–	P.167
Roplano	G782X	12/6	3/61
R.6.B	RC578	6/–	P.86
Rudder Bug	RC366	11/–	P.87
Rumpler C.V.	MA402	7/6	P.13
Rumpler Taube	MA168	5/–	P.13
R.W.D.8 Polish Trainer	FSP174X	13/–	8/44
Ryan	FSP554	6/–	P.19
Ryan N.Y.P.	FSP663	5/–	P.18
R.T.P. Pusher Streamline	I180X	3/–	1944
Saab 18A	MA300	10/–	P.28
Saab Safir	CL966	6/–	P.36
Sailaway	G730	2/6	P.63
Sailplanes	G558X	6/9	8/54
Saracen	PET830	4/6	P.55
Sans Egal	G725	7/6	P.64
Satan	G717	5/–	P.64
S.A.T.U.	G400X	9/–	12/50
Scalded Kitten	PET352X	3/9	AMA/49

Name	Code No.	Price	Ref.
Scamp	MA173	5/6	P.58
Schooler	MA299	3/6	1/59
Schoolmaster	RC875	6/6	P.84
Scimitar	MA270	7/6	P.78
Scramble	CL454X	6/–	11/51
Scylla	G246X	3/9	12/46
Seagull	WP190X	4/6	1944
Sea King	WP689X	15/–	3/58
Seai	WP849	10/–	P.46
Sea Nymph	WP542X	7/6	3/.54
S.E.5	FSR274	4/–	P.39
S.E.5A	FSP682	5/–	P.19
Semilena	MA142	6/6	1/53
Scnnapod	MA389	4/6	3/64
September Warrior	MA385	3/6	P.82
Seraph	G533X	5/–	12/53
Sharkface	RC887	3/6	P.85
Sharpoon	CL806	5/–	P.76
Sharp Shooter	PET804	5/–	P.55
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Short Scion	FSR193X	6/	1944
Short Seamew	MA218	5/6	P.30
Shorty	G583	4/6	P.65
Shrike	CL634X	5/–	9/56
Shrimp	PET300X	4/–	9/48
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Silver Patrol Mark 1A	G277X	4/6	12/47
Simple Simon	CL773	3/–	P.78
Simple Simul TX	MA965	7/6	P.93
Simpletone	RC976	7/6	P.93
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Skiffler	CL665	7/6	P.77
Skip	WP758	5/–	P.46
Skua	CL771	7/6	P.77
Skybolt	CL908	3/6	P.80
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Skyhawk	CL679	5/–	P.72
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Skyline Tutor	MA217	5/6	7/55
Skyliner	RC858	10/–	P.85
Skyliner	MA66	2/9	2/50
Skyranger	D541	4/–	P.44
Skyscraper	PET/RC889	3/6	P.85
Skytale	PET636	12/6	P.54
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Slingsgy S-21B Sedbergh	FSG/1018	3/6	N.I.
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Smoke Trail	PET/RC864	3/6	P.90
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Snark	G469X	9/–	4/52
Snorky	PET424X	4/9	4/51
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Sopwith 1½ Strutter	CL651	7/6	P.33
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Sopwith Snipe	MA339	10/–	P.13
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Splatt	CL785	3/6	P.83
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Supermouse	CL823	5/–	P.73
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Tantivvy	CL530X	4/6	AM/A 53
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Zephyr	MA232	4/6	3/56
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